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GOVERNMENT OF INDIA.
RAILWAY DEPARTMENT.
(RAILWAY BOARD.)

State Railway Code for the Engineering
Department.

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(RAILWAY BOARD.)

State Railway Code for the
Engineering Department.

FIRST EDITION.



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PREFACE.

This volume contains the rules for the guidance of the officers of the Engineering Department of State Railways in the performance of their duties, principally in connection with matters affecting the expenditure of cash and stores both on Open Lines of railways, and on lines under construction. Much of the matter in the previous Code has been omitted as redundant or no longer necessary, or applicable to present day conditions. In a book of this kind it is manifestly impossible to provide for every contingency which may possibly arise in the course of engineering work, it is only possible to lay down the general principles for guidance. Engineer officers are, therefore, expected to exercise a reasonable judgment in dealing with cases not specially provided for in this Code or in any other extant orders.

The rules relating to establishment and other matters common to more than one department of the railway are contained in a separate volume.

The following Chapters and paragraphs of the State Railway Open Line and Construction Codes are superseded by this Code:—

State Railway Open Line Code, Volume I.

Chapter III.—Paragraph 205 to 213 and 258 to 281.

State Railway Open Line Code, Volume II.

Chapter I.—Paragraphs 1 to 58, 60 A, 61 to 63 and 65 to 71.

Chapter II.—The whole.

Chapter III.—Paragraphs 152 to 154.

State Railway Construction Code.

Chapters I, III, IV, Annexure to IV, V, and VIII.

—The whole.

Chapter VI.—Paragraphs 556 and 557.

Chapter VII.—Paragraphs 956 to 1000 and 1031 to 1034.

H. L. COLE,

Secretary, Railway Board.

SIMLA;

The January 1922.

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This Index has been compiled solely for the purpose of assisting references. No expression used in it should be considered in any way as interpreting the rules.

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GOVERNMENT OF INDIA.
RAILWAY DEPARTMENT.
(RAILWAY BOARD.)

State Railway Code for the Engineering
Department.

CHAPTER I.—Duties of Departmental Officers.

Section I.—Engineers-in-Chief.

1. The immediate administrative head of a railway under construction is the Engineer-in-Chief, who works under the control of the Railway Board. The Engineer-in-Chief exercises, in place of the powers of his Departmental rank, those assigned to his post, or conferred on him from time to time,—*vide* Book of Financial Powers of Officers of the Railway Department.

2. When lines under construction are placed under the control of the Agent of an Open Line, the Agent will exercise the powers of an Engineer-in-Chief in independent charge of a line under construction.

3. Throughout this Code the expression Engineer-in-Chief includes the Chief Engineer of an Open Line unless the contrary is clear from the context.

4. The Chief Engineer of an Open Line is the administrative head of the Engineering department and works under the control of the Agent. He is the administrative and professional head of his Department, for the efficient and economical working of which he is responsible.

Engineers-in-Chief.

5. Instructions for the preparation of the main budget and revised estimates both of open lines and of lines under construction, and other budget rules of a general nature are contained in Chapter II of the General Code. The Engineer-in-Chief is responsible that no expenditure is incurred in excess of the Budget grant. It will also be his duty to see that budget allotments are fully expended in so far as is consistent with general economy and the prevention of large expenditure in the last months of the year for the sole purpose of avoiding lapses. He will be responsible for ensuring that any money which is not likely to be needed during the year is promptly surrendered so as to allow of its appropriation for other purposes.

6. The headquarters of the Engineer-in-Chief will be fixed by the Railway Board.

7. The Engineer-in-Chief, subject to the approval of the Agent in the case of an Open Line, will fix the headquarters of Executive Engineers and Sub-Divisional officers.

8. Subject to the limitation of the sanction for a Division, an Office, or a work, the Engineer-in-Chief has full powers to transfer the staff under his control.

9. The Engineer-in-Chief will exercise a concurrent control with the Chief Auditor over the duties of the officers of the Department in connection with the accounts of expenditure, and will give all possible support to that officer in enforcing strict attention to the regulations concerning the disbursement of money, the custody of stores, and the submission of accounts. He will have no authority over the Chief Auditor in regard to audit, but will have a claim on him for assistance in matters relating to accounts and finance, and compliance with his wishes to the fullest extent possible. And, at the same time, the Engineer-in-Chief will be bound to arrange that the Chief Auditor is kept fully cognizant of all proceedings and proposals affecting in any way the financial

Divisional Officers.

administration of the line, so that the latter may watch them properly and give the Engineer-in-Chief the required advice and aid to enable him to comply with the demands of financial regularity.

10. Although the Chief Auditor is the head of the Accounts Branch and is required to make inspections of the Account Offices of disbursing officers, this will not relieve the Engineer-in-Chief from the responsibility for the maintenance of the authorised system of accounts throughout the railway. The Chief Auditor and the Engineer-in-Chief should aid one another to render the management of the accounts of the Department as perfect as possible. It will be the duty of the Engineer-in-Chief to maintain in his office a Divisional Schedule of Rates and to examine the Registers of Works so as to keep a vigilant watch over the rates of work. In his orders on the Divisional Statement of Objectionable Items the Engineer-in-Chief should give such information as will be of assistance to the Chief Auditor.

11. The Engineer-in-Chief is empowered to take summary measures for the correction of any faults of system or practice, whether in the execution of work, or in the preparation of accounts by officers of the Engineer-in-Chief's Department, which may come to his knowledge.

Section II.—Divisional Officers.

12. The construction of a railway will be distributed over Divisions, the limits of which will be settled by the Head of the Railway and, when necessary for the convenient execution and supervision of work, a Division may, with his sanction, be divided into two or more Sub-Divisions, each in charge of an Assistant Engineer or Upper Subordinate.

13. An Open Line will be similarly divided into Divisions, usually called Districts, and Sub-Divisions, the limits of which will be subject to the approval of the Agent.

Divisional Officers.

14. The Executive Engineer is in immediate charge of a Division. He arranges the details of the execution of work in his Division, superintends the works and the accounts, receives all cash advances and, where he has a drawing account, distributes funds to his subordinates and is responsible for the punctual execution of orders issued by the Engineer-in-Chief.

15. Executive Engineers are responsible for the accuracy of all drawings they submit and must attest them by their signatures.

16. It is the duty of the Executive Engineer to pay strict attention to the economical application of all labour and materials. He should also strive to make arrangements for bringing economically into use, on all occasions, the articles procurable in the local markets and the natural products of his district.

17. Executive Engineers are strictly prohibited from commencing the construction of any work or expending public funds without the sanction of competent authority; also from making or permitting any, except trifling, deviations from any sanctioned design in the course of execution unless under specific authority, or in case of emergency, under the rules in Chapter VII. All unauthorised expenditure will be incurred at the risk of the officer responsible.

18. Executive Engineers are responsible for the good quality of all work done under their orders, and cannot, without proper authority, transfer to any one else the executive charge of works entrusted to them for construction.

19. Executive Engineers will take the necessary steps for securing payment for the works under their control. In his arrangements for account-keeping the Executive Engineer will exercise a real and efficient control and check over his Accountant, or accounts clerks, and is responsible that his accounts are regularly posted from day to day.

Sub-Divisional Officers.

20. Executive Engineers are responsible for the correctness, in all respects, of the original records of cash and stores, receipts and expenditure, and for seeing that complete vouchers are obtained.

21. Every Executive Engineer is required to report immediately to the Engineer-in-Chief any important accident or unusual occurrence connected with his Division, and to state how he has acted in consequence.

22. A summary of the powers of Executive Engineers in charge of Divisions of lines under construction which, as regards expenditure, can only be exercised within the limits of Budget allotments, will be found in the Book of Financial Powers of Officers of the Railway Department.

Section III.--Sub-Divisional Officers.

23. The charge of each Sub-Division will as a rule be held by an Assistant Engineer or Upper Subordinate. Executive Engineers, subject to the approval of the Engineer-in-Chief, are at liberty to select any Assistant Engineer or Subordinate for the charge of a Sub-Division without reference to his grade or standing in the Department. In no circumstances should a person of a superior grade be required to serve under one of an inferior grade.

24. A Sub-Divisional officer is under the orders of the Executive Engineer of the Division and is required to assist him generally in the performance of his duties. Sub-Divisional officers are responsible for keeping such accounts of cash and stores as are prescribed by this Code and by local orders.

25. When detached, an Assistant Engineer, under the control of the Executive Engineer of the Division, will correspond with the local authorities, and conduct his duties generally in accordance with the rules laid down for Executive Engineers.

Upper Subordinates. Divisional Accountants.

Section IV.—Upper Subordinates.

26. Upper Subordinates, when not holding charge of Sub-Divisions, will generally be employed to superintend works or portions of large works, either at the headquarters of the Executive Engineer or of his Sub-Divisional officers or in detached localities. They shall not, as a rule, be required to keep any public money beyond an imprest. It will be their duty at all times to see that artificers and labourers receive full payment at prescribed periods.

27. Upper Subordinates are not to be employed as clerks or draftsmen in the offices of Executive Engineers, except temporarily in urgent cases, or as a means of instructing them while on probation. This is not to prevent Executive Engineers from requiring them to prepare, or copy, drawings or documents connected with works or projects on which they may be employed.

28. When in charge of a work, the subordinate will keep muster-rolls of all labour and all prescribed accounts.

Section V.—Divisional Accountants.

29. The duties of Divisional Accountants are to check the arithmetical accuracy of all accounts and returns received from subordinates, and all bills and other claims presented by contractors and others, and to compile the divisional accounts and other returns with accuracy in accordance with the several forms prescribed, and generally to assist the Executive Engineer in all matters relating to the expenditure of Cash and Stores in the Division.

30. Accountants are responsible for the correct compilation of the divisional accounts, according to the prescribed rules, from the data furnished by Sub-Divisional officers and others, for the accuracy of all

Divisional Accountants.

calculations therein, and for bringing to the Executive Engineer's notice any irregularities that may come to light in examining the accounts.

31. The relative position of a Divisional Accountant to the Executive Engineer in respect to accounts is analogous to that of a Sub-Divisional officer to an Executive Engineer in respect to works, and the responsibilities of the latter for the work of the Divisional Accountant are similar to those which attach to him in respect to the execution of works under charge of other subordinates. The Divisional Accountant should be treated, as the head of the Executive Engineer's office establishment.

General Rules.

Chapter II.—Classification of Expenditure.

Section I.—General Rules.

32. Works executed by the Engineering Department can be classified under one of the following three heads, and the incidence of expenditure follows the rules relating to either Capital or Revenue Accounts.

- (a) Wholly chargeable to Capital ;
- (b) Wholly chargeable to Revenue ;
- (c) Chargeable partly to Capital and partly to Revenue.

Occasionally also work is done for other Government Departments, or private individuals.

33. Capital outlay on State Railways is recorded under the Major Head, "53—Construction of State Railways," while the Working Expenses and Maintenance of an Open Line of Railway are chargeable to the Revenue Major Head, "XI—State Railways—Working Expenses."

Section II.—Capital Expenditure.

34. All Capital outlay whether on Open Lines of Railway or on Lines under Construction is chargeable to the Detailed Heads of Account given below.

MAIN HEADS.	SUB-HEADS.
<i>Final Heads.</i>	
I. — PRELIMINARY EXPENSES	{ (a) Survey expenses. (b) Plant. (c) Establishment.

Capital Expenditure.

MAIN HEADS.	SUB-HEADS.
<i>Final Heads—contd.</i>	
II.—LAND.	(a) Earthwork.
III.—FORMATION	(b) Tunnels.
	(c) Walling.
	(d) Side drains.
IV.—BRIDGEWORK	(a) Major Bridges.
	(b) Minor Bridges.
V.—FENCING	(a) Fencing.
	(b) Road crossings.
VI.—ELECTRIC TELEGRAPH AND TRAIN CONTROL EQUIPMENT.	(a) Main Line— (i) Permanent-way, including Mile Gradient posts. in- and (ii) Ballast.
VII.—BALLAST AND PERMANENT- WAY.	(b) Sidings— • (i) Permanent-way. (ii) Ballast.
	(c) Points and Crossings.
	(a) Stations and Offices.
VIII.—STATIONS AND BUILDINGS	(b) Workshops, Store-buildings, etc.
	(c) Staff quarters.
	(d) Station machinery.

10 CLASSIFICATION OF EXPENDITURE. [CHAP. II.

Capital Expenditure.

MAIN HEADS.	SUB-HEADS.
<i>Final Heads—concl'd.</i>	
IX.—PLANT	(a) Engineering. (b) Construction. (c) Locomotive. (d) Carriage and Wagon. . (e) Station and office furniture. (f) Steamers or boats required for the general purposes of the railway but not for public traffic (g) Electric. (h) General.
X.—FERRIES	(a) Ferries. (b) Floating bridges.
XI.—ROLLING-STOCK	(a) Locomotive. (b) Carriage and Wagon. (c) { (i) Motor-cars, Rail. (ii) Motor-cars, Road.
XII.—GENERAL CHARGES	(a) Salaries and allowances. (b) Office accommodation and quarters. . - Miscellaneous.

Capital Expenditure.	
MAIN HEADS.	SUB-HEADS.
<i>Suspense Heads.</i>	
XIII.—LONDON INVOICES.	
XIV.—LONDON STORES.	
XV.—PURCHASES.	
XVI.—SALES.	
XVII.—STORES	General Stores. Depôt Stores. Stores-in-transit.
XVIII.—WORKSHOP SUSPENSE ACCOUNT.	
XIX.—MANUFACTURES.	
XX.—MISCELLANEOUS ADVANCES.	

35. The charges to be comprised under each of the heads named in the preceding paragraph are as follows :—

I.—PRELIMINARY EXPENSES—

Expenses of all kinds connected with the survey and location of the line, preparation of the plans and estimates for the project and administrative and general charges incurred before the work of construction is sanctioned or commenced. The cost of preliminary expenses connected with any extensive alterations to a project requiring the employment of a distinct staff after the general project has been sanctioned or commenced, should be charged to this head ; the cost of petty revisions of alignment, etc., for which no special staff is engaged, should be charged to the estimates for construction.

Capital Expenditure.

II.—LAND—

Compensation to the owners or occupiers of such land as may be required, either permanently or temporarily for the purposes of the Railway, including payments for houses, trees, crops, or other property situated on such land. Compensation for damage, loss, or injury caused to adjacent property by operations incidental to the construction of the railway. Salaries, fees, allowances, etc., of Civil Officers and other persons deputed for, or employed on, the valuation, transfer, or demarcation of land. All charges connected with the primary daghelling and temporary marks, necessary to enable the Civil authorities to determine the boundaries, should be included under this head.

- (a) *The rent or cost of buildings required for the accommodation of the staff or for offices, store buildings, etc., for the general purposes of the railway, is not chargeable to this head.*
- (b) *Land required for the manufacture of materials, also for the acquisition of materials by quarrying, mining, boring or other operation, and payments for royalty, mining rights, etc., connected with the same are not chargeable to this head, but may be dealt with as part of the cost of the manufacturing operations or, if more convenient, charged off finally to the work concerned.*
- (c) *Permanent boundary marks are included under F (a).*

III.—FORMATION—

- (a) *Earthwork.*—All charges connected with the earthwork in formation of embankments and cuttings (except those included under "Preliminary Expenses" or "Land"); pitching, turfing or other protection to such earthwork; except retaining walls, side drains, etc., which are shown separately under sub-heads (c) and (d) of this head; tree-planting, service roads, also diversions of roads, streams, or rivers incidental to the execution of such earthwork; all repairs and maintenance necessary to keep the earthwork in proper order until the opening of the railway.

Diversions of the railway in connection with bridges or other works are chargeable to the works concerned; but important diversions of the line for special purposes

Capital Expenditure.

may be considered as temporary railways and separately estimated for. Each such case will be considered on its merits according to the purpose for which it is required and other circumstances.

(b) *Tunnels*.—All charges connected with tunnels.

Diversions of the railway, plant for rope inclines, and other works required for temporary use during the construction of a tunnel are chargeable to the estimate of the tunnel concerned, but see ruling under III (a) above as regards important diversions.

(c) *Walling*.—All charges connected with retaining or revetment walls and breast walls, etc., that may be required either to hold up the sides of a cutting or to support formation in embankments.

(d) *Side drains*.—All charges connected with side drains in cuttings, and catch-water drains.

IV.—BRIDGEWORK—

Bridges, viaducts, culverts, flood openings, spill causeways, irrigation channels, and all pitching, protection, or training works connected with the same. Also diversions of the railway [except important diversions which should be dealt with under the ruling in III (a) above] incidental to the construction of bridges or bridgeworks, and any temporary means provided for crossing a river during the progress of the work.

Over-bridges provided for taking public roads or footways across the railway are chargeable to "Road Crossings,—V (b)."

Bridges having a total waterway of 60 lineal feet or upwards or having a clear opening of 40 lineal feet or upwards, in any one span, are classed as "Major Bridges." All other works of this nature are classed as "Minor Bridges."

V.—FENCING—

(a) *Fencing*.—Fences, walls, palings, hedges, ditches, permanent boundary marks, and other means employed for demarcation of, or prevention of trespass upon, the land taken up for the railway line, stations, etc.

- *The fencing of detached portions of land occupied for separate purposes, such as General Offices, Staff quarters, etc., will be charged to the works concerned.*

Capital Expenditure.

- (b) *Road-crossings.*—Level-crossings, with gates, bars, turnstiles, gate-keepers' lodges, approaches, and any signals or other appliances connected with the working of the same. Also all over-bridges provided for taking public roads or footways across the railway.

VI.—ELECTRIC TELEGRAPH AND TRAIN CONTROL EQUIPMENT—

- (a) The cost of a permanent cable over a river which it is not intended to bridge in the immediate future, if it is required for the railway; also the cost of any instruments obtained otherwise than through the Government Telegraph Department.
- (b) *The cost of provision of all lines of telegraph as required for the open line, and, as a general rule, of instruments for working the same, is borne by the Telegraph Department, the railway paying rent and maintenance charges only.*
- (c) *If any part of the permanent line is erected and worked for the benefit of construction before the railway is opened, the cost of rent and maintenance is chargeable to "General Charges—XII."*
- (d) *Any special expenditure incurred for the erection of temporary lines required for construction purposes only, and maintenance and rent of instruments for the same, is chargeable to the works concerned.*
- (e) *Any special expenditure incurred for laying a temporary line or cable across a river to enable the permanent line to be worked during the construction of a bridge is chargeable to the bridge.*
- (f) *Telephonic installations are chargeable to the estimate for the building in which installed under Head "VIII—Stations and Buildings, etc."*
- (g) The cost of Telegraph Instruments obtained otherwise than through the Government Telegraph Department is debited to the Head "*Electric Telegraph*" and not to "*Plant*."

VII.—BALLAST AND PERMANENT-WAY—

- (a) Main Line—
- (i) *Permanent-way including Mile and Gradient Posts.*—
Includes the provision and laying of the permanent-

Capital Expenditure.

way, complete over the entire main line, with all sleepers and fastenings, including bridge sleepers and maintenance of the line, in good running order until the opening of the railway.

Mile posts and distance marks of all kinds, the numbering of telegraph posts and gradient posts.

- (ii) *Ballast*.—Includes the provision and laying on the main line, and over-bridges where necessitated by the design, of ballast up to the full section required by the specification and also maintenance of the same until the opening of the railway.

(b) *Sidings*—

- (i) *Permanent-way*.—Includes the provision and laying of the permanent-way complete in all sidings with all sleepers and fastenings.
- (ii) *Ballast*.—Includes the provision and laying in all sidings of ballast up to the full section required by the specification.

(c) *Points and crossings*—

Includes the provision and laying of all points and crossings with the special sleepers required for the purpose and all lever handles, etc., and the maintenance of the same in good order until the opening of the railway.

All rodding and interlocking appliances of every description should be excluded. These are to be provided for under head "VII (d)."

VIII.—STATIONS AND BUILDINGS—

- (a) *Stations and Offices*.—Booking offices, waiting and refreshment rooms, goods-sheds, post and telegraph offices, platforms, latrines for the use of passengers, administrative offices, and generally all station buildings, offices and other structures (including overbridges and sub-ways connecting platforms or other parts of a station) connected with the passenger and goods traffic and general business of the railway, excepting such as are classed under "Workshops," "Staff Quarters," or "Station Machinery."

Capital Expenditure.

Permanent fittings and furniture specially made to suit a particular building or purpose are chargeable to the estimate for that building or purpose. Ordinary moveable furniture liable to be shifted or transferred from one building to another is to be estimated for under "Plant—Station and Office Furniture—IX (c)."

- (a) The cost of telephonic installations for Open Lines when not chargeable to Revenue under the New Minor Works Rule *rule* para. 48 (4) should follow that of the building in which installed, thus, installations at Stations or Administrative offices should be classified under Capital Head VIII (a), Stations and offices, and those in Workshops and Store-buildings, under Head VIII (b), Workshops and Store-buildings, etc.

Temporary Offices erected for the use of the staff employed during construction are to be estimated for under "General Charges" unless such offices are erected specially for a particular work, in which case their cost is chargeable to the contingencies of that work.

- (b) *Workshops, Store-buildings, etc.*—Erecting, fitting, or pattern shops, foundries, smithies, and other buildings specially intended for the construction, erection or repair of locomotive engines or carriage and wagon stock, or for other mechanical work required for the purposes of the railway after opening for traffic, buildings and plant used for the production of gas or electric power. All permanent foundations in such buildings for heavy tools or machinery; also columns, chimneys, pits, and other structures forming an integral part of the building itself as distinguished from articles of plant and machinery separately fitted up or erected therein. Also all offices, out-buildings, enclosure walls, roads, etc., belonging to, or in connection with, the workshops, and all store buildings, and store-yards, either for workshops or for general purposes.

Estimates for workshops are to be made out for each group or set of buildings separately; the individual buildings or structures in each group appearing as distinct items, each having its own separate quantities and cost clearly shown.

Lines of rail laid up to the limits of a workshop are to be estimated for under "Permanent-way sidings,—VII

Capital Expenditure.

(b)", but within the limits of a workshop under head VIII (b).

A small workshop attached to an engine-shed for carrying out petty repairs to running engines is to be estimated for as a part of the engine-shed under the sub-head "Station Machinery."

Temporary workshops for a particular work are not chargeable to this head, but to the estimate for the work concerned. Temporary workshops for general purposes during construction are chargeable to Head XII.

- (c) *Staff Quarters*—Quarters for the residence of the staff employed on the open line, also buildings connected with their instruction, amusement, or general accommodation such as schools, institutes, recreation-rooms, swimming baths, gardens, hospitals, dispensaries, running-rooms, and all out-buildings, wells, fences, roads, and other works required in connection therewith. Gate-keepers' lodges at level-crossings are an exception to this rule [see "Road Crossing,—V (b)"].

Temporary quarters erected for the accommodation of the staff employed during construction are to be estimated for under "General Charges" unless such quarters are erected specially for a particular work, in which case their cost is chargeable to the contingencies of that work.

- d) *Station Machinery*.—All machinery and arrangements in use at stations for watering, fuelling, and turning of engines; repairing, cleaning and examination of running locomotives and carriage and wagon stock; loading, unloading, and weighing of goods; shunting or transfer of rolling-stock from one line to another, except points and crossings which are chargeable to "VII (c)" and starting, stopping, and crossing of trains. Under this head, therefore, are classed such items as engine-sheds, wells, reservoirs, tanks, and tank-houses, pumps, piping, water-cranes, ash-pits, turn-tables, fuel-stages, carriage-sheds, carriage examining pits, traverser hydraulic machinery, capstans, platform cranes, weigh-bridges, buffer-stops, scotch-blocks, signals of all kinds (including indicating and ground signals), cabins and interlocking appliances, line clear, or tablet pick-up apparatus, etc., etc.

Capital Expenditure.

IX.—PLANT—

- (a) *Engineering*.—Tools, machinery, instruments, live-stock camp equipage, trollies, and appliances of all kinds required for the Engineering Department or for Engineers' workshops for the open line.
- (b) *Construction*.—All plant required for construction purposes except perishable articles and articles of small value. The head will be credited on completion of construction with the depreciated value of plant returned into stores, sold or taken over by the open line and the balance remaining at debit of this head as a final charge will represent the depreciation or loss incurred on Plant during construction

NOTE.—1. Perishable articles of tools and plant and articles of small value are finally chargeable to the works to which they are first issued, no subsequent adjustments being required to be made even if such articles are transferred to other works.

NOTE.—2. The cost of motor-trolleys obtained for use on lines under construction is to be charged to the head "Plant."

- (c) *Locomotive*.—Tools, machinery, instruments and appliances of all kinds required in connection with locomotive workshops or for the purposes of the Locomotive Department, including all work in the erection, fitting, painting, etc., of the same.

Foundations in workshops for heavy machine tools, also chimneys, pits, and other works forming an integral part of the building itself, will be provided for in the estimate for the building under "Workshops, etc." The arrangements for washing out engines, and fittings connected with water-supply for a running shed, will be provided for in the estimate for the shed under "Station Machinery."

- (d) *Carriage and Wagon*.—The same rules as for locomotive plant.
- (e) *Station and Office Furniture*.—All furniture for stations and for the permanent offices for the open line.

Furniture required for the temporary offices of the staff employed during construction is to be estimated for under "General Charges—XII."

- (f) *Steamers or boats required for the general purposes of the railway, but not for public traffic.*

Capital Expenditure.

- (g) *Electric*.—Plant, machinery and appliances of all kinds required for the production of electric power and in connection with electrical installations, and the cost of first equipment of motors, lights and other fittings which are employed to utilise the power generated in the various buildings or places including streets and roadways in the vicinity of staff quarters, in which the electric current is used.
- (h) *General*.—Tools, machinery, instruments and appliances of all kinds required for the Printing press and other general purposes of the railway and for departments other than those included under sub-heads (a) to (g) above and VIII (d) Station Machinery.

X.—FERRIES—

Ferries of all kinds to be provided and worked by the railway for the public conveyance of passengers, animals, or goods, with all plant, stock, appliances, jetties, wharves, landing-stages, etc., connected therewith, also floating bridges formed on pontoons or boats.

XI.—ROLLING-STOCK—

- (a) *Locomotive*.—Locomotive engines and tenders required for the railway after opening for traffic.
- (b) *Carriage and Wagon*.—All coaching and goods stock required for traffic purposes, also rolling-stock for the Engineer and Locomotive Departments on the open line, such as ballast wagons, rail-carriers, travelling oil or water tanks, break-down trains, travelling cranes, carriage fittings for oil gas or electric lighting.

NOTE.—Rolling Stock not provided with springs and regular buffing and draw gear (except motor-cars, rail and road, which are classified under Rolling Stock), is classified as "Plant" and not "Rolling Stock" and the expenditure thereon is chargeable to VIII (d), Stations and Buildings—Station Machinery or to the appropriate sub-heads of IX.—Plant.

- (c) *Motor Cars* { (1) Rail } Motor-cars and vans of all descriptions for whatever purposes required after opening of the railway for traffic.

Trolleys of all kinds required for the open line are to be classed under "Plant—Engineering IX(a)," except Motor trolleys which should be debited to (c) Motor-cars, (1) Rail.

Capital Expenditure.

When rolling-stock is temporarily used for construction purposes, any expenditure thereon which will not ultimately benefit the open line, such as temporary additions and alterations should be charged to works, as well as the cost of repairs executed during the period of construction. On the completion of the construction works and transfer of the rolling-stock to the open line, the vehicles will be put in thorough repair, the cost of such repairs being debited to the estimates of the works on which they have been used together with a charge for depreciation which will be credited to the head "Rolling Stock."

XII.—GENERAL CHARGES—

All expenditure incidental to the construction of the railway as a whole, as distinguished from expenditure incurred in connection with particular works.

- (a) *Salaries and Allowances.*—Salaries and allowances of all kinds payable to officers employed on the general work of the railway, and to their subordinates and office establishments, the pay of servants on the regular staff of the railway, such as office messengers, watchmen, post-runners, chain-men, etc., the wages of office servants employed on menial work, such as sweepers, water-carriers, etc. Also fees to professional persons not on the regular staff of the railway whose services may be occasionally or periodically required.

The salaries of Foremen or Inspectors specially engaged for a particular work, their office establishment (if any), and pay of workmen and labourers generally are chargeable to the work concerned.

General Charges incurred by the Secretary of State for Stores obtained from England and for other miscellaneous services will be debited to head "XII.—General Charges—(a) Salaries and Allowances."

- (b) *Office accommodation and quarters.*—Offices erected, acquired or rented for purposes connected with the construction of the railway, and not required for the open line. Also furniture for use in such offices.

The cost of a temporary office erected specially for a particular work is chargeable to the work concerned.

Capital Expenditure.

Quarters.—Dwelling-houses erected or acquired for the general staff employed during the construction of the railway and not required for the open line.

The cost of temporary quarters erected specially for the staff or workmen employed on a particular work is chargeable to the work concerned.

(c) *Miscellaneous.*

(i) *Instruments.*—All instruments, mechanical appliances and apparatus required during the construction of the line whether for outdoor work or for office use. Also surgical instruments for dispensaries, etc.

(ii) *Office expenses.*—All contingent expenses connected with the working of offices and maintenance and rent of telegraph instruments during the construction of the line, such as charges for books, maps, professional papers, stationery, and petty office requirements. Also legal expenses and advertising.

(iii) *Indian freight and handling.*—The Indian freight, loading and unloading charges on stores from port or source of supply.

This allocation is not to be applied in respect of coal and fuel or large despatches of permanent-way material or girders or to non-standard articles of stores which are purchased for immediate consumption on works and not passed through the stores books. In these cases the charges in question will be debited to the work or purpose for which the stores are obtained.

(iv) *Miscellaneous Indian charges on stores.*—All such expenditure as port charges, insurance, petty yard charges and the like.

XIII.—LONDON INVOICES—

This head is not required for Imperial State Railways, as under present arrangements for the supply of English stores, English invoices are primarily dealt with in the office of the Accountant-General, Railways, and the value of English stores is carried direct to the debit of the head "London Stores" by credit to "Expenditure in England" in the Railway books. The head will, however, be required for Railways constructed from Provincial Funds and for Railways constructed for Native States. In the

Capital Expenditure.

accounts of the latter "London Invoices" will be credited by debit to "London Stores" on receipt of the invoices and debited by credit to "London Account" on receipt of advices of Home payments.

XIV.—LONDON STORES—

This head will embrace the cost of articles shipped from England, at invoice rates, together with all charges incurred on them up to the time of their being received in store. It will be debited on receipt of invoices, and will be cleared by a charge to the head "Stores" on receipt of the stores by the District Controller of Stores.

XV.—PURCHASES—

This account is credited with the value of the stores received and charged with the cash payments made, for stores purchased in India.

XVI.—SALES—

This account will be debited with the value of all stores sold and cleared by cash recoveries.

XVII.—STORES—

This account will be debited with the value of all stores received by the District Controller of Stores and is credited with his issues.

XVIII.—WORKSHOP SUSPENSE ACCOUNT—

This head is debited with charges for cash and stores incurred in the manufacturing, repairing and erecting work of the workshops and is credited with the outturn of these shops. Charges for the construction and furnishing of workshops fall under heads VIII and IX.

XIX.—MANUFACTURES—

This account represents the expenditure incurred in the manufacture of bricks, lime, etc., at various parts of the line. It is cleared by outturn.

XX.—MISCELLANEOUS ADVANCES—

This head is debited with such payments or adjustments as cannot immediately be carried to any final head. If the head of service to which it appertains be known, no charge is to be debited to Miscellaneous Advances, simply because it is in some way irregular.

Revenue Expenditure.

36. The charges incurred on the repair and maintenance of completed works, so long as the portion of the line on which they are situated is not opened for traffic, are debited to the original estimates for those works if the accounts of the work are still open otherwise as a separate debit.

Section III.—Revenue Expenditure.

37. After a railway has been opened for public traffic, all expenditure is allocated either to Capital or Revenue. The classification of Capital expenditure has already been described. Revenue expenditure of the Engineering Department is chargeable in the main to Abstract A. of the Revenue Account. The main and sub-heads of this Abstract are described below.

38. There are eight main heads in Abstract A., namely :—

- I.—General Superintendence.
- II.—Maintenance and Renewals of Permanent-way.
- III.—Repairs of Bridges, etc.
- IV.—Conservancy of Rivers.
- V.—Repairs of Stations and Buildings.
- VI.—New Minor Works.
- VII.—Unclassified Expenditure.

39. The head *I.—General Superintendence* is subdivided into (1) *Engineers' Salaries*, (2) *Engineers' Allowances*, (3) *Subordinate Superintendents*, (4) *Allowance of Subordinate Superintendents*, (5) *Overtime Allowances*, (6) *Office Expenses*, and will bear the Salaries and Allowances of the Chief Engineer, Executive and Assistant Engineers, Upper and Lower Subordinates, Permanent-way, Interlocking and Girder or Bridge Inspectors and of their Office Establishments and contingent office expenditure incurred including

Revenue Expenditure.

maintenance of office telephonic installations. 'Subordinate Superintendents' include all Inspectors and others who, as a rule, do not perform manual labour.

40. The expenditure under the main heads II to V of this Abstract, should be recorded in two main divisions, namely, *Ordinary expenditure* and *Programme Revenue expenditure*. The latter head comprises all revenue expenditure connected with betterments chargeable to capital, all revenue expenditure on renewals (including casual renewals) of rails, sleepers and fastenings, such as fish plates, fish bolts, spikes, points and crossings, switches, tongue tails, etc., and revenue expenditure on wholesale renewals or strengthening of bridges and girders involving a debit to capital. The cost of repairing flood damages and protection works should be charged to ordinary expenditure unless the repairs are associated with an element of betterment necessitating a charge to capital in which case their cost should be shown against Programme Revenue expenditure. All other revenue expenditure should be classed as ordinary expenditure.

NOTE 1.—The cost of ballast, renewals of plant and the cost of repairs to bridges is chargeable to Ordinary Revenue.

NOTE 2.—The expenditure on the four main heads II to V is composed of wages and materials, but, except in the case of main head II, these two kinds of expenditure are not required to be recorded separately.

41. Head II.—*Maintenance and Renewals of Permanent-way* records the outlay incurred in the up-keep of the permanent-way. Under "Wages" will be included the salaries of the fixed staff of mates, gangmen, line watchmen and trollymen, together with the cost of labour entertained for special renewals and a share of the general establishment of time-keepers, carpenters, masons, blacksmiths and other skilled labour and also all charges for the loading and unloading of ballast trains working for maintenance purposes including truck money allowance of ballast train guards. The sub-head "Materials" will bear the cost of rails and

Revenue Expenditure.

sleepers and fastenings used in renewals and of timber and other stores used in re-timbering the track on bridges, and will be credited with the value of materials taken out of the line. It will also bear the cost of ballast obtained for renewals.

1. 'Wages' includes payments to all persons who, as a rule, perform manual labour.
2. The cost of sidings, if any, specially constructed in connection with the quarrying and carriage of ballast for Revenue purposes will be charged to this head.

42. The expenditure under the head *III.—Repairs of Bridges, etc.*, is required to be sub-divided into (1) *Bridges and Tunnels*, and (2) *Miscellaneous*. Sub-head (1) will bear the outlay on general repairs of bridges and tunnels and will include the cost of painting and renewing girders and re-timbering the side-ways of bridges, together with the wages of bridge watchmen and a share of the general establishment of time-keepers, carpenters, masons, blacksmiths, and other skilled labour. Sub-head (2) will bear all charges for the maintenance of earthwork, fencing, level crossings, boundary pillars and other items of a miscellaneous nature.

NOTE.—Repairs and renewals of fencing of detached land for general offices, staff quarters, etc., will be charged to the heads concerned and not to A-III (2).

43. The head *IV.—Conservancy of Rivers* will bear all charges for maintaining river bunds and river training works; but not those for maintaining works which are directly connected with bridges, such as the revetments of banks at bridge approaches or the stone protection of piers, which will be borne by head III.

44. The head *V.—Repairs of Stations and Buildings* is sub-divided into (1) *Repairs of all buildings other than staff quarters* and (2) *Repairs of staff quarters*. Sub-head (1) will bear in addition to the outlay on maintenance of station buildings, yards, workshops, offices, etc., charges incurred in maintaining steamer

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ghats and station machinery of every description and will include a share of the general establishment of time-keepers, carpenters, masons, blacksmiths and other skilled labour. Revenue charges in connection with gate-keepers' lodges and signals are charged to this sub-head.

45. The head *PI.—New Minor Works* records the expenditure on all minor original works chargeable to Revenue.

46. The head *VII.—Unclassified Expenditure* is usually sub-divided into four sub-heads, namely:—

1. "*Plantations.*"—All expenditure on the planting, upkeep and care of trees along railway lines and in the compounds of railway staff quarters, the planting and maintenance of station gardens, and of nurseries for the supply of the required trees and plants, will be charged to this sub-head.
2. "*Tools and Plant.*"—All repairs and renewals of Tools and Plant of the Engineering Department will be charged to this sub-head.
3. "*Loss on Stores, etc.*"—To this sub-head will be debited so much of the depreciation on stores in stock and the loss on stores sold, become unserviceable or lost, as may be assigned under the orders of the Agent to debit of Engineering expenses. Charges for loss or breakage of Revenue Stores carried free by the Traffic Department will be debited to the head for which the stores are carried.
1. "*Carriage of Revenue Stores.*"—All freight charges incurred on Home line for materials for the maintenance of the way, works and stations will be charged to this sub-head. Thus all ballast train charges debitable to Revenue will go to this sub-head.

Allocation of Expenditure between Capital and Revenue.

Chapter III.—Allocation of Expenditure.**Section I.—Allocation of Expenditure between Capital and Revenue.**

47. The following rules govern the allocation of expenditure between Capital and Revenue.

1. Capital bears all charges for the first construction and equipment of a project as well as charges for maintenance on sections not opened for working, and charges for such subsequent additions and improvements as may be admitted by competent authority.
2. An addition or improvement to admit of the cost being charged to Capital must be a permanent enlargement and substantial improvement in the character and object of the existing imperfect structure.
3. Revenue bears all charges for maintenance and working expenses which embrace all expenditure for the working and up-keep of the railway, for alterations, and for such minor additions or improvements as it may be considered desirable to charge to Revenue instead of increasing the capital cost of the railway.

NOTE.—Sidings required purely for Revenue purposes, e.g., ballast and fuel sidings, are chargeable to Revenue and not to Capital.

4. New Minor Works costing Rs. 2,000 and under are chargeable to Revenue.
5. If any extraordinary casualty should occur, such as the destruction of a bridge by flood, the case must be regarded as exceptional, and the cost of construction or replacement will be charged to Capital or Revenue or divided between them as may be deemed proper by the Railway Board according to the circumstances of the case.
6. In the case of renewals and replacements of existing works involving improvements, if the estimated cost of the new work is less than the cost of the original work or below the new minor works limit of Rs. 2,000, the whole cost of the new work will be charged to Revenue and that of the original work will be left

Allocation of Expenditure between Capital and Revenue.

at the debit of Capital. In other cases the whole cost of the new work will be charged to Capital, and that of the original work, which may be estimated if the actual original cost is not known, will be written back from Capital to Revenue.

7. The allocation of the cost of temporary works which are incidental to other works should follow that of the main works in connection with which they are required and where the main works are debitable partly to Capital and partly to Revenue their cost should be divided between the two in rateable proportions. This applies to temporary diversions.
8. The cost of purely temporary or experimental work on an open line is chargeable to Revenue, but it may be subsequently transferred to Capital if the work is permanently adopted.

NOTE.—In the case of trial stations, if the estimated cost is within the limit for New Minor Works (which should generally be the case for a true Trial Station the necessity for which is at all open to doubt), the amount should be charged against the Revenue Account, but if the cost exceeds that limit the amount should be charged against the Capital Account. If, however, the station is hereafter abandoned the expenditure should be written back to Revenue.

9. Except as provided for by paragraph 35 II (b), all charges for land taken up *permanently*, irrespective of the amount of cost or whether required for Capital or Revenue works are debitable to Capital under the main head II.—Land. Rent or other miscellaneous charges in connection with hire of land should be charged to the work or purpose concerned.
10. In the case of light rails being renewed with heavier rails, Capital may be charged with a portion of the cost of the new material proportionate to the excess weight by which the new rails exceed the old rails, subject to the *proviso* that such charge to Capital shall never exceed the *actual* excess on the cost of the new materials over the original cost of the old.

NOTE.—In cases in which renewal of track by a different weight of rail and different type of sleeper is proposed, the debit to capital should be arrived at by estimating the original cost of the material in the track to be renewed and the cost at present prices of similar material, and deducting whichever is greater from the cost of the new material which it is proposed to use, see Railway Board's letter No. ¹⁵³⁶ 81-C. of 5th January 1915.

Allocation of Expenditure between Capital and Revenue.

11. In connection with estimates for the strengthening and renewing of bridges the allocation of the cost of each bridge should be considered separately on the following basis :—

- (a) Where old girders are replaced by new and heavier ones Capital should only be charged with a portion of the cost of the new material proportionate to the excess weight of the new over the old girders or with the difference in cost of the new material over the original cost of the old whichever is less, the balance of cost together with the charges for dismantling and re-erecting should be debited to Revenue which will receive credit for the present value of the materials returned. The fact that the girders are not entirely worn out but are only renewed on account of increased loads, would be provided for by the larger credit to Revenue for old girders.
 - (b) Where any of the released girders are subsequently used in duplicating other spans, Capital should bear the cost of the second pair of girders at their *present* value as credited to Revenue. But the total charge to Capital when released girders are used in duplicating shall in no case exceed the charge that would be made to Capital if the old girders were replaced by new ones of the necessary strength.
 - (c) Similarly where the strengthening of bridges takes the form of increased weight of material added to the existing girders in preference to replacing the girders with new ones of the necessary strength, the charge to Capital in respect of the new materials may not exceed the charge that would be made to Capital if the old girders were replaced by new ones of the necessary strength.
 - (d) Raising the road bed in the approaches of railway bridges, necessitated by the replacement of girders, originally erected by others of greater depth, is not in itself an improvement, but is an essential part of the improvement effected by introducing deeper girders. Accordingly the cost of the additional earthwork carried out in raising the road level is chargeable to Capital provided that the deeper girders give stronger bridges.
12. In all cases of renewals, all charges on account of freight of materials from Depot to site and loading and unloading of materials should be debited wholly to Revenue.

48. The following are the principles which govern the grouping of works each costing not more than Rs. 2,000 but in the aggregate more than Rs. 2,000 for the purpose of debiting the aggregate cost of the works to Capital.

Allocation of Expenditure between Capital and Revenue.

It has to be considered in the first place—

- (1) whether an item of petty work is effective for the purpose for which it is intended, independently of the construction of some other petty work, or
- (2) whether it forms a link in a chain or group of petty works, one of which cannot be carried out independently of the others.

In the latter case, there can be no question—the component items comprise one complete scheme the cost of which is chargeable to Capital in ordinary course if the total exceeds Rs. 2,000.

In the former case, the following further conditions must be fulfilled before the total cost if exceeding Rs. 2,000 can be charged to Capital:—

- (a) The petty works whether at the same station, or at different stations, are similar in character; or, if not similar, are connected by the same general idea.
- (b) They are to be undertaken at or about the same time as part of a general scheme of such work.

49. The general principles which regulate the division of Railway Expenditure between Capital and Revenue should be followed in the provision of Railway Institutes, and schools for children of Railway employes on State Railways and also quarters for school teachers.

50. No charge should in future be made to Capital for supervision by the *Revenue Staff* of works chargeable to Capital, whether on an open line or line under construction, unless the Capital works to be carried out render absolutely necessary the employment of additional staff which would be discharged on the completion of such work.

1. When additional establishment is employed specially to supervise Capital works, it should be charged to that account. But when such establishment is engaged in connection with works chargeable partly to Capital and partly to Revenue, it should be allocated to Capital and Revenue in the same proportion as the estimates for the works are charged.

2. As regards charges for the supervision of the manufacture of stores the same rule will apply.

Allocation of Expenditure between the Railway and other Government Departments.

51. All charges for establishment not specially sanctioned against Capital are chargeable to Revenue on a Railway the maintenance of which has become a charge to Revenue. When, however, a line is partially opened for traffic, charges incurred partly on account of Capital and partly on account of Revenue, such as the salaries of the Engineer-in-Chief, of the Chief Auditor of the Controller of Stores and of their offices and of the Medical Officer in charge of the Railway as well as Executive Establishments and offices not wholly devoted to Capital or to Revenue, should be divided between the two accounts in the proportion of the Indian Capital Expenditure to the Revenue Expenditure *plus* Revenue Earnings.

52. The debit to Capital in connection with legal expenses should be admitted only in cases where the expenses are entirely in connection with works executed before the line was opened for traffic, but on the general rule that no portion of ordinary open line Establishment is charged to Capital though partly employed on Capital works, no share of any fixed retaining fee paid to Standing Counsel should be carried to the Capital Account of the line.

Section II.—Allocation of Expenditure between the Railway and other Government Departments, etc.

53. The incidence of the cost of earthwork, undertaken in the first instance as a famine relief measure and subsequently utilized in the construction of a railway, and also of the cost of surveys, of the setting out and demarcation, and of the acquisition of land on the route of an unsanctioned railway undertaken with a view to affording employment for people requiring famine relief,

Allocation of Expenditure between the Railway and other Government Departments.

will be regulated in accordance with the following rules:—

- (i) The value of such earthwork need not be debited to the Capital Account of the railway concerned until the construction of the line is undertaken.
- (ii) When the construction of the line is undertaken in the same financial year as that in which the earthwork is done as a famine relief measure, the Capital Account of the railway will be debited and the head "43.—Famine Relief" credited.
- (iii) In cases when the adjustment cannot be effected in the accounts of the year in which the expenditure on such earthwork was incurred owing to construction of the line not being commenced there is no need to relieve the head "43.—Famine Relief," but the value of the work should eventually be debited to the Capital Account of the Railway by credit to the revenue head "XXXV.—Miscellaneous."
- (iv) The debit to the Capital Account of the railway should in all instances be limited to the value at *normal* rates of the famine earthwork actually found to be available when the construction of the line is taken in hand, it being left to the railway authorities to arrive at the quantity of work either on the basis of the measurements of the officers who originally did the work with or without a reduction for weathering, etc., according to circumstances), or by actually measuring it afresh, or by such other methods as shall be found suitable for the purpose.
- (v) All expenditure incurred in connection with the setting out, demarcation, acquisition of land, and surveys, shall form a charge against the head "12.—Miscellaneous Railway Expenditure" until such time as sanction to the railway project is accorded when it should be brought on to the Capital Account of the project.

54. The following rules regulate the construction and maintenance of Railway sidings and other works required for military purposes on lines other than those classed as Military Lines:—

- (1) Permanent sidings and other railway works required to be made for military purposes, whether on Railway

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land or elsewhere will be constructed by the Railway Administration concerned.

- (2) The cost of the construction of troop sidings, platforms, etc., will be charged against Military Works Funds.
- Recoverable materials, such as permanent-way, girders, signals, and other moveable things which could be used again for railway purposes, but are unlikely to be required by the Military Authorities, will be supplied by the Railway Administration concerned, and debited to the Capital account of the railway.

The railway will make an annual charge against Military Works Funds of $9\frac{1}{2}$ per cent. on the cost of materials so provided to cover interest and maintenance, and of $2\frac{1}{2}$ per cent. for maintenance on the cost of the work paid for from Military Works Funds excluding the cost of any land. The charge for supervision, so far as State Railways worked by the State are concerned, will be leviable at the rate of $12\frac{1}{2}$ per cent. only on the cost of works debitable to Military Works Funds.

- (3) If the platforms and sidings required take off the main line beyond the limits of a station yard, the necessary signalling arrangements will be provided on the same terms as the platforms and sidings and the Railway Administration will be paid from Army Funds the cost of the working of such signals in addition to the charges debitable to Military Works Funds under rule (2).
- (4) When land has to be acquired for the sidings or platforms, the amount payable for the land will be included as part of the cost of the work chargeable to Military Works Funds, unless the Railway Administration concerned prefers to acquire the land for its own purposes.
- (5) In the case of any sidings or platforms completed before 18th April 1896, the whole cost of which, including materials, has been paid for from Military Works Funds, the Railway will charge only $2\frac{1}{2}$ per cent. for maintenance on the whole cost, exclusive of the cost of land.
- (6) In the event of the abandonment of the sidings the Railway Administration will be recouped, from Military

Allocation of Expenditure between the Railway and other Government Departments.

Works Funds, the cost of taking up and returning to store, the permanent-way and other materials.

- (7) The Railway Administration carrying out any work required for Military purposes will have to observe the same precautions in regard to watching the possibility of excess as are taken by it in the case of estimates for purely Railway works. If, in any case, it becomes apparent that there is likely to be an excess of more than 5 per cent. over the sanctioned estimate, a revised estimate shall be prepared, and submitted without delay, in the manner indicated above to the Government of India in the Army Department for sanction to the proposed additional expenditure.
- (8) The outlay chargeable to the railway, whether on original or revised estimates, will be dealt with under the ordinary rules governing outlay from Railway Funds, and a note should therefore be made on the estimate, for the information of the Government of India in the Army Department, as to the authority competent to sanction the outlay debitable to Railway Funds.
- (9) The actual expenditure on the Military Works and Army portions will be debited in transfer to Military Works and Army Funds, either monthly as incurred, or in quarterly or other instalments as may be convenient to the Railway Administration, but to allow of due provision being made in the Military Works and Army grants, the Railway Administration should advise the Military Authorities, when a work is sanctioned, of the probable amount to be expended up to the close of the current official year, and further advice should be given as early as possible, of any probable lapse from the provision made.

NOTE.—Debits against Army Funds should be raised against the Military Accounts Department, and that against Military Works Funds against the Examiner of Accounts, Military Works.

55. The following rules govern the adjustment, between Railway and Military Funds, of all expenditure on works required for military purposes on railways, or sections of railways, which are classified as "Military Lines."

These rules will not, however, apply in cases where they conflict with existing practice in regard to the cost of maintenance of works *already constructed*.

Allocation of Expenditure between the Railway and other Government Departments.

A.—Chargeable to Railway funds :—

- (i) The cost of all works necessary for the adequate handling and transport by the Railway, in its capacity as a carrying agent, of military personnel, animals and stores. Under this head are included such works as the formation and permanent way of sidings, signalling arrangements, raised or rail level platforms of ordinary width and surface for entraining or detraining troops and animals, and for loading or unloading stores, lighting arrangements in railway yards and on railway platforms, all ordinary station buildings, railway staff quarters, and such water supply as is necessary for the working of the railway
- (ii) The cost of all land required in connection with the above works.

B.—Chargeable to Military funds :—

- (i) The cost of all works unconnected with the actual working of the railway, but needed by the military authorities for their own administrative purposes. Under this head are included all works necessary for the conveyance of personnel, animals and stores to and from the railway, such as roads, whether approaching a platform or whether approaching the metals at rail level, metalled surfaces in lieu of platforms, metalled surfaces for parking transport vehicles, sheds specially required for the storage of military supplies, buildings, lighting arrangements and water supply unconnected with the actual working of the railway.
- (ii) The cost of land required in connection with the above works, unless the railway authorities prefer to acquire such land themselves.

NOTE.—In the case of water supply arrangements, the cost of wells, head-works, etc., necessary for the actual supply will be borne in full by either the railway or the military authorities, as may be the more convenient. If, for example, wells are sunk by the Railway to provide water for railway purposes and the military authorities require a supply of water for purposes unconnected with the working of the railway, military funds will bear the cost of distribution from the railway main or mains, *plus* a charge made by the railway for the actual water supplied. Military funds will not be called upon to bear any proportion of the cost of the original installation. The same will apply, *mutatis mutandis*, in cases where the railway derive their water from a military installation.

C.—The cost of maintenance will in each case follow the incidence of the initial expenditure on the work.

Allocation of Expenditure between the Railway and other Government Departments.

56. The following rules govern the incidence of the cost of providing roadways over large Railway bridges for public and military traffic:—

- (1) The necessity for a roadway for other than Railway traffic on each proposed new Railway bridge, shall in future be decided on its merits.
- (2) In order to enable a decision to be come to, the Railway Administration shall prepare estimates comparing the cost of a Railway bridge pure and simple with that of a Railway bridge furnished with a roadway fit for—
 - (a) General, including Military traffic purposes, and
 - (b) Military purposes only.
- (3) If a roadway fit for all traffic be decided upon, the cost of the extra expenditure shall be borne by the Local Government, or Governments, on whom fall the burden of the neighbouring main roads and in that case the Military Department will not be required to contribute towards such additional cost.
- (4) If it should be decided that a roadway fit for all traffic is not necessary, and if, at the same time, the Military authorities should demand a roadway fit for Military use only, the Military Department shall pay for the extra cost of providing whatever will, in their opinion, suffice for their requirements.
- (5) The cost of approaches to the roadways should follow (3) or (4) as the case may be.
- (6) The annual cost of maintenance of the non-railway part of the bridge shall be defrayed by the Railway Administration which may however recoup itself by the levy of such tolls as may be sanctioned by proper authority. But whether such recoupment be actually effected or not, the cost of maintenance is, in every case, to be borne by the Railway, even in circumstances where the levy of a toll is not possible. These orders apply equally to the incidence of the cost of the maintenance of the non-railway part of the bridge, constructed in circumstances other than those referred to in sub-paragraphs (4) and (5) above, and which should be completed to a standard that will not entail excessive charges for maintenance.

Allocation of Expenditure between the Railway and other Government Departments.

- (7) These rules apply equally to cases where existing bridges have to be renewed, or largely altered, as well as to altogether new ones. In all such cases therefore it is necessary to ascertain the wishes of the Local Governments and the Military Department in this respect whether the original bridge carried a roadway or not.
- (8) The Agent, in submitting the estimates for the work to the Railway Board, will also report the approximate extra cost which would be involved if a roadway had to be provided, the necessary enquiries will be made by the Railway Board and the Agent will be informed in due course.

57. The principles laid down in the previous paragraph apply equally to expenditure involved in the provision of footways over railway bridges.

58. The incidence of cost of maintenance of works of defence, *vide* paragraph 106, as between the Railway and Military Works Services will be determined as follows :—

- (a) When the buildings are suitable for occupation by railway servants and the Railway Administration concerned wishes to have the right of occupation (free of rent) the cost of maintenance, even when vacant, shall be borne by the Railway Administration, subject to the following conditions :—
- (i) The railway occupation shall be terminable at any moment by the Local Military Authorities, and
 - (ii) the Military Authorities shall have the right of entry and inspection at any time.
- (b) Where it is not desired that the Railway shall have the right of occupation, the actual cost of maintenance (*plus* the usual supervision charges) should be borne by Military funds.

59. Railway Administrations will undertake the survey, construction, etc., of private sidings in accordance with Standing Orders on the subject laid down by the Railway Board.

Lines under Construction.

Chapter IV.—Preparation of Estimates.**Section I.—Lines under Construction.**

60. No Railway or extension or branch of a Railway shall be commenced till the Project for the same shall have been submitted to and sanctioned by the Secretary of State or the Government of India.

61. Detailed rules as to the manner in which the estimate for a Railway is to be submitted for the sanction of the Government of India are to be found in the "Rules for the preparation of Railway Projects," copies of which may be obtained from the Superintendent of Government Printing, Calcutta.

62. A construction estimate will provide for the building and equipment of the railway up to a standard that will be sufficient for working such traffic as may be expected during the first year or two after opening.

When application is made for sanction to the commencement of construction, a certificate must invariably be given that the construction estimate has been scrutinised by an engineer of experience within three years of the date of application, and any change in the amount of the estimate, which may have been found necessary owing to change of rates or other conditions since the estimate was originally prepared, must be reported to the Railway Board with an explanation of the causes necessitating the change.

63. A construction estimate must invariably be prepared in such detail as to reduce to a minimum the probability that any item of expense which is capable of being foreseen, has been overlooked. It should be remembered particularly that the provision for contingen-

Lines under Construction.

cies allowed in the estimate is not intended to meet items of expense which can be foreseen and which are reasonably likely to occur. With good estimating it should seldom be necessary to encroach, to any appreciable extent,

* The estimated cost of work should be shown by items when such cost is over Rs. 25,000 and when for no other work of the same type have details of the cost been shown; further, when there are a number of works of the same type, the aggregate cost of which exceeds this amount, the details of cost of one such work should be shown.

on the provision for contingencies. The detailed estimates, on which the cost of works of small * size comprised in the project has been based, need not be submitted to the Railway Board, but they must none the less be prepared carefully and be placed on record,

so that further estimating when construction is sanctioned, shall be unnecessary, and be readily available when required. The total estimated cost of each such work should be shown separately in lump in the construction estimate.

64. When it is necessary in connection with a new project to provide rolling-stock, the estimate for such rolling-stock should be kept entirely distinct from the estimate for the remainder of the project, except in the case of lines of independent gauge where the estimates for rolling-stock should be included in the construction estimates. Estimates for rolling-stock must be prepared in adequate detail by the Open line officer ordinarily responsible for the preparation of such estimates where the projected line is to form part of an existing system. Junction arrangements may similarly be excluded, when this is for administrative reasons considered desirable, with the specific sanction of the Railway Board.

65. In a project estimate direct charges only should be included. Leave and pension allowances which are indirect charges need not be entered, but will be added when necessary by the Railway Board before sanction to the project estimate is accorded.

Open Lines.

The manner of calculating the Indirect charges for estimate purposes is as follows :—

Capitalisation of abatement of land revenue will be calculated at twenty-five times the annual amount of land revenue remitted.

Leave and pension allowances will be calculated at the rate of 14 per cent. on the total establishment charges.

Section II.—Open Lines.

66. The papers to be submitted with the project for a work will consist of a list of references, a report, a specification, and a detailed statement of quantities, with an abstract showing the total estimated cost of each item. The allocation should also be shown in the detailed estimate and in the abstract. These documents together form what is called "the estimate" in the sense of this Code. In the case of a project consisting of several works, the report may be a single document for all the works, and likewise the specification; but details of measurements and abstracts may conveniently be prepared for each work, supplemented by a general abstract bringing the whole together.

67. The report on the estimate (*vide* paragraph 66) should give a brief abstract of the correspondence that has passed with reference to the project, and state in clear terms the object to be gained by the execution of the work estimated for, the reasons for the adoption of the estimated project or design in preference to others, and any peculiarities which require elucidation. The time within which the work may be expected to be completed must also be mentioned. When the project is of an important nature, involving scientific points or other considerations of special character, the report must also contain a complete account of the basis on which every part of

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it has been framed, the various considerations that have guided the designer on questions of engineering details, economy of construction, utility or the practical working of the project when carried out, and the method in which it is proposed to execute any portion of the work involving unusual difficulties of construction. Any local considerations which may affect the project, and particularly any circumstances affecting the rates, must also be fully entered into.

68. The report will be followed by the specification, which must show fully and clearly, but as briefly as possible, the details of the work, how each portion is to be done, and what materials are to be used.

69. A general specification, describing clearly the nature of construction of the various parts of the work, will usually be necessary in addition to the standard specifications, which will be referred to, where necessary.

70. Such full details as are obtainable regarding land required for the project, for which compensation must be paid, should be given.

71. The statement of detailed quantities following the specification will include the measurements of land, approximate or detailed, as the case may be, for which compensation will have to be paid, the area of each description of land being separately shown.

72. The rates of the various descriptions of work are intended to cover all charges usual to, or necessary for, the execution of the work, and should generally agree with the schedule rates, but where from any cause these are not considered sufficient, or are in excess, a detailed statement must be given in the report showing the manner in which the rates used in the estimate are arrived at. The same rule will hold good with regard to any rate differing from those formerly in force in the district, when no standard schedule exists, or when any

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work of a description not previously executed in the division is estimated for.

73. In addition to the usual charge of 5 per cent. for unforeseen contingencies, all incidental expenditure which can be foreseen such as works establishment, sheds for workmen and stores, should be separately provided for in the estimate. The provision for contingencies may not be diverted to any new work or repair which is not provided for in the estimate, and of which the cost exceeds Rs. 200, without the sanction of the Agent.

74. The abstract of the estimate will show the total cost, in rupees only, of each kind of work, the only exception to this rule being the case of miscellaneous petty works which may be entered in the abstract without quantities, the estimated cost alone being given.

75. To facilitate the preparation of estimates, a schedule of rates of each kind of work commonly executed shall be kept up in each open line district, and it will be the duty of the Chief Engineer when inspecting divisional offices, to see that correct schedules of the rates at which work is actually being carried out are invariably recorded in a complete and satisfactory manner. The regulations for the due record of rates in a clear and systematic manner shall be laid down by the Agent.

76. Standard specifications of each kind of artificer's work, commonly executed, will be kept up for each Railway under the orders of the Agent, and should be referred to by number under the several items in the schedule of rates.

77. All classes of estimates and completion reports beyond the powers of sanction of the Agent should be submitted to the Railway Board with an explanatory covering letter containing information on all relevant points. For convenience of reference the first paragraph

General Rules applicable to both Open Lines and Lines under Construction.

of the forwarding letter should contain an inset in the form below :—

Name of work. Railway to which chargeable.		
Capital.	Revenue.	Total.
Existing sanctioned estimate. (if any)		
Amount of present estimate		
Are funds available?		
Has the Chief Auditor agreed to the proposed allocation?		

Any necessary explanation regarding the above points should follow in the body of the letter. See also paragraph 83.

Section III.—General Rules applicable to both Open Lines and Lines under Construction.

78. All classes of estimates and completion reports submitted for sanction to the Head of the Railway or the Railway Board should be countersigned by the Chief Auditor in token of his acceptance of the estimate as being unobjectionable from the audit standpoint.

79. Estimates for works on which it is intended to use prison labour will, as in the case of free labour, provide for the full market value of the work to be done, but a note of the reduction, if any, to be effected thereby should be made at the foot of the abstract of the estimate.

80. The following measures are prescribed for general use :—

Length.—The English foot. As a general rule, the foot will be divided decimally ; duodecimal divisions, i.e., inches

General Rules applicable to both Open Lines and Lines under Construction.

may, however, be used, if absolutely necessary. For long distances, the English mile and feet. The yard is never to be used.

Area.—The square foot, divided as a general rule decimally 100 square feet being termed one 'square.'
For land the English acre and decimals ; or for small areas, square feet.

Capacity or Solidity.—The cubic foot divided, as a general rule, decimally

Value.—All rates in estimates, etc., are to be quoted in rupees and decimals to two places.

Velocity.—Feet per second.

Angular velocity.—Revolutions per second.

Work.—Foot-pounds (avoirdupois).

Heaviness —Pounds (avoirdupois) per cubic foot.

Power.—Foot-pounds per second, or horse power of 33,000 foot-pounds per minute.

Heat —Pounds (avoirdupois) of water raised one degree Fahrenheit.

Water discharges.—Cubic feet per second.

Water duty.—Irrigation, canal—Acres per cubic foot per second.

Ditto tank—Acres per million cubic feet.

81. The following units of work are prescribed :—

	<i>Unit of rate.</i>
Earthwork	Per 1,000 cubic feet.
Brickwork	Per 100 cubic feet.
Concrete	
Pisé work	
Road metalling	
Rubble masonry	
Ashlar masonry	Per cubic foot.
Pitching	
Woodwork	Per 'square' of 100 square feet.
Painting	
Plastering	
Flooring	
Roofing	
Turfing	Per square foot.
Doors and windows	
Land	Per acre.

General Rules applicable to both Open Lines and Lines under Construction.

82. Every drawing submitted with an estimate should have a clear title, which should be shown on the back on two opposite corners, so as to show outside whichever way the paper be rolled up. The signature of every officer, through whose hands the design passes, should be affixed.

83. Advice of all detailed estimates sanctioned by the Head of the Railway Administration or higher authority will be communicated to the Chief Auditor in such form as may be prescribed by the Agent or the Engineer-in-Chief, as the case may be, and with a view to avoid audit objections as far as possible the Head of the Railway should freely consult the Chief Auditor on all matters of proposed expenditure whether in the form of estimates or otherwise and in all proposals submitted to the Railway Board it should be mentioned whether or not they have been accepted by the Chief Auditor as unobjectionable from the audit standpoint. If the Chief Auditor sees any objection to the proposed expenditure a *verbatim* copy of his note stating his objections should be obtained and forwarded for the information of the Railway Board.

84. The submission of estimates to the Railway Board should not be delayed when there may be doubt as to the correct allocation of an estimate and the question at issue will take time to settle. In such cases the Railway Board will be prepared to sanction the estimate, if otherwise in order, leaving the allocation for subsequent consideration.

General Rules.

Chapter V.—Execution of Works.

Section I.—General Rules.

85. An order to prepare an estimate is no authority for the execution of a work and verbal orders, as being liable to misapprehension, will not be accepted as a sufficient warrant for commencing any work or incurring any liability. This is not, however, to interfere with the prompt obedience of every officer in the department to the lawful orders of his superiors; but the written confirmation of such orders or requisitions, within a reasonable time, must be at once solicited by the officer addressed, and he will be responsible for any expense thus incurred,* unless he can show that he has conformed to this rule, stating details and giving a rough estimate of the expense.

86. All works must be carried on as rapidly as is possible with reference to the funds allotted and soundness of execution. All interruptions of large works in progress should be immediately reported to the Head of the Railway Administration, the causes and probable duration of such interruptions being duly explained.

87. Quarterly Progress Reports for each line under construction should be submitted to the Railway Board before, at latest, the 25th day of the month following the close of the quarter to which the return refers. The returns should be prepared in the Form and in accordance with the note of general instructions issued as enclosure Nos. 1 and 2 of Railway Board's Circular No. 1866 R. C., dated the 11th June 1913. These reports should continue to be submitted until the whole line has been completed, the last report being submitted for the quarter in which the construction account is closed. Where, however, a line under construction consists of two or more distinct section

General Rules.

all of which are likely to be completed at different dates each such section should be regarded as a separate line for the purposes of these progress reports.

88. On receiving orders, or being authorised by any competent person to commence any work, the Executive Engineer may under competent authority entertain the necessary temporary works establishment within the amount sanctioned, and subject to any general rules that the Head of the Railway Administration may see fit to lay down. When it is necessary to bring labourers and artificers from a distance, they may be allowed wages for the number of days occupied in the journey to and from the site of the work, provided they join the work with proper despatch. At the discretion of the Executive Engineer *bonâ fide* travelling expenses may also be allowed to them. The above charges must be borne by the estimate of the work.

89. There is no restriction as to the classes of establishment whose pay may be charged to works, but the following conditions must be fulfilled before the pay can be so charged :—

- (1) The persons must be employed for the subordinate supervision or accounting for stores and labour.
- (2) They must be paid by the day or month, their employment ceasing with the cessation of the work.
- (3) The cost must be shown as a separate sub-head of the estimates, *vis.*, Works (or Temporary) Establishment.
- (4) The rate of pay must in no case be more than Rs. 250 per *man-em.*

NOTE.—The pay of draftsmen, and clerks other than “store” and “muster” clerks actually employed at the site of works, is not to be charged to works as a works establishment.”

Any other additional establishments required must be applied for through the Engineer-in-Chief, and duly sanctioned before being entertained.

90. Military labour should be employed on railways on a system as nearly similar to the contract system as possible. The Railway Administration will

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pay rates not exceeding those at which similar work in the same locality is being, or could be, satisfactorily carried out by a civil contractor, the Engineer-in-Chief being the sole authority for deciding that such rates are not excessive, and the considerations that will guide him being precisely the same as in the case of an ordinary civil contractor. Payments will be made direct to the Officer Commanding the Troops employed who will determine the amounts to be paid to the men, and also will, as in the case of a civil contractor, be required to meet from the payments for labour all extra expenditure incurred in connection with their employment, including any excess over the rates of compensation for dearness of provisions prevailing at the ordinary station of the unit, and all charges connected with transport, movement, extra clothing, hutting, water supply, conservancy, etc., and repair and maintenance of tools and plant. Unless it be otherwise provided by special rule no portion of the extra expenses incurred by reason of the employment of troops on these works shall be borne by the military authorities.

91. Advances to Military units when employed under a contract system, upon works carried out by the railway, may be granted to meet the heavy initial expenditure which has to be incurred in connection with such employment, under the following conditions :—

1. A lump-sum advance will be made by the Controller of Military Accounts concerned to the Officer Commanding the Unit.
2. Such advance shall not in any single case exceed one quarter of the total amount payable on the contract, or Rs. 10,000 whichever is less; but within this limit the Controller of Military Accounts will comply with a requisition for the amount of advance required.
3. The requisition will be made by the Officer Commanding the Unit; but it must be supported by a statement from the employing authority of the approximate total amount payable on the contract.

General Rules

4. The advance having been made will be debited to the employing authority through the Central Adjusting or other appropriate account.
5. All questions which may arise thereafter relating to the recovery of the advance shall be settled between the employing authority and the Officer Commanding the Unit.

92. When parties of Sappers and Miners are employed under Executive Engineers, the regimental discipline and internal economy of the detachment must not be interfered with. The men so employed will not use their service equipment, unless, under exceptional circumstances, Executive Engineers are unable to supply at once the requisite tools. Any tools required should therefore, be supplied by the Executive Engineers, under the usual departmental rules, with the least possible delay. Huts will be furnished for the temporary shelter of the European non-commissioned officers when required.

93. The management of convicts employed on railway works must be arranged under such regulations as may be laid down by the Local Government concerned.

94. (a) Every member of the Engineer and Upper Subordinate establishment will, in addition to the prescribed Measurement Book, keep a note-book in which will be entered daily any particulars with reference to the works in progress which may call for remark; such as the nature of the soil in which foundations are about to be commenced, the quality of materials delivered at the site of a work, or of the workmanship in a building.

(b) Remarks may also be made in the note-book regarding the qualifications of subordinates, artificers and others employed on the works, the satisfactory or unsatisfactory operations of Contractors, and in fact anything relating to the works in progress which should be brought to the notice of superior authority, either as being of

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general professional interest, or as requiring immediate notice or orders.

(c) The dates of all inspections, with a list of the works, and a memorandum of the accounts inspected, with details on various points considered worthy of remarks, should also be given, and these note-books must be considered as official records, to be produced whenever required by superior authority. They should be neatly and systematically kept and indexed.

95. For all important works an order-book should be opened and retained thereon. In this all instructions to the Executive subordinate or the Contractor, as the case may be, should be duly entered, with the replies opposite.

96. A strict record must be kept of the nature and depth of the foundations of all important structures. For culverts and small buildings a note on the drawing will be sufficient, but for all major bridges, large buildings and generally all structures the depth of the foundations of which exceeds 6 feet, plans and cross-sections, and, if necessary, longitudinal sections, must be prepared. These diagrams should show the nature and reduced levels of the strata passed through and reached and of all footing courses, plinth, etc.; they should be filed in the Executive Engineer's office within one month after the masonry in the foundations has been begun.

97. No religious edifice shall be destroyed or injured in the execution of works without the full and free consent of the persons interested in it, nor without the concurrence of the principal civil or political authority on the spot, except by the orders of the Local Government within whose jurisdiction the edifice stands.

98. Officers employed on the construction and maintenance of Railways will take all possible steps to prevent the destruction of ancient remains of archaeological interest.

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99. As military considerations of the highest importance may be involved in any change in through communication, all proposals for the removal of bridges or ferries, Imperial or Provincial, must invariably be submitted for the consideration and orders of the Railway Board.

100. Executive Engineers should, as a rule, make their own arrangements for the supply of labour and materials without having recourse to the civil authorities.

101. All unusual losses in the manufacture of materials, and all important accidents in building, must, on their occurrence, be reported to the Engineer-in-Chief.

102. In the execution of works, every care shall be taken that the safety and convenience of the public are duly attended to, and that all operations are carried on in such a manner as to interfere as little as possible with the traffic or ordinary pursuits of the people. Temporary roads and bridges should, when necessary, be provided; and the occupation of land, when practicable, be so timed as not to lead to the destruction of standing crops. Brick and lime-kilns must not be erected so close to the inhabited part of any town or cantonment as to be a nuisance.

103. Executive Engineers and other officers or subordinates in charge of works should furnish immediate information to the proper civil authorities on the occasion of every serious accident; and in case of death on the spot, they should not allow the body to be removed till an enquiry has been held.

104. The employment of female labourers on works in the neighbourhood of soldiers' barracks should be avoided as far as possible.

105. Powder magazines, and all buildings which from their height or exposed situation, are likely to be struck by lightning, should be provided with lightning

Works of defence of Railway Buildings, etc.

conductors, which must be erected and periodically tested in accordance with the instructions on the subject.

Section II.—Works of defence of Railway Buildings, etc.

106. The design and construction of block houses and works for the defence of Railway bridges, stations and tunnels, which are designed for occupation by regular troops, or which may, in certain circumstances, be garrisoned by them, and of which the cost in consequence is debitable to the Military Works estimates, and which are to be carried out by the agency of the Railway, will be regulated by the following rules :—

- (i) No new works or alterations or additions to existing works shall be executed until the project has been examined and passed by the Director-General of Military Works. For this purpose the project duly countersigned by the responsible Civil or Political Authority concerned shall be forwarded to the General Officer Commanding the District in which the work is situated for submission to authority competent to sanction the execution of the works.
- (ii) Whenever it can be adopted with safety to the Railway (of which the Railway Administration will be the judge), works of defence in connection with Railways will be carried out by the Military Works Services, if within reasonable distance of a Military Works District.
- (iii) When this is not possible, the work will be done by a Railway Engineer, who, when convenient, will, by preference, be a Royal Engineer. Detailed working drawings will be furnished by the Military Works Services to the Railway Engineer.
- (iv) During the construction of the work, under the procedure in clause (iii), it will be inspected at least twice by a Royal Engineer Officer from the Military Works Services. On completion it will again be inspected by the Commanding Royal Engineer of the District who will furnish a report to the Railway Administration that it is satisfactory, or is deficient

Works of defence of Railway Buildings, etc.

in certain respects, as the case may be, and this report will be attached to the Completion Report of the works for record.

- (r) During the execution of the work under the procedure laid down in clause (iii) the Military Works inspecting Officer and the Railway officer in charge of the work will be invariably placed in direct communication with each other on all subjects connected with the work.

107. The following rules are to be observed when defensive works are to be constructed by the agency of a Railway Administration for the occupation of armed forces which in peace time are under the orders of the Civil or Political Authorities:—

- (i) The opinion of the General Officer Commanding Division or Independent Brigade, in whose area the work is to be situated, will first be obtained as to whether the work in question should be classed as a work of defence under Army Regulations, India, Volume II, paragraph 335.
- (ii) In the event of the General Officer Commanding not considering that the work in question should be classed as a work of defence, then no further military opinion is necessary, and the work may be executed by the agency usually employed by the Local Government.
- (iii) In the event of the General Officer Commanding considering that the work contemplated should be classed as a work of defence, then:—
 - (a) The said General Officer Commanding will be consulted in regard to the conditions which should determine the siting and general design of the work, after which the designs and estimates will be prepared by an Officer of the Royal Engineers under the orders of the Local Government and will be submitted to the General Officer Commanding for his remarks. The Local Government will then transmit the design and estimates together with the remarks of the General Officer Commanding thereon to the Director-General of Military Works who, after examining the Projects, will forward them to the Government of India for disposal.

Departmental Charges.

- (b) When authorised the work will be carried out under the superintendence of an Officer of the Royal Engineers. If necessary, application will be made to the Government of India for the services of a Royal Engineer Officer for the purpose.

108. At stations where Railway Workshops exist it would be preferable to build armouries within the precincts of the workshop; where there are no workshops some place in proximity to the Railway station would probably be safest.

Section III.—Departmental Charges.

109. When work is undertaken by the Engineering Department for the public (including employes of the Railway) or other Government Departments, private Railway Companies, or State Railways leased to or worked by Companies, a charge of $12\frac{1}{2}$ per cent. on the total cost of the work (cash and stores), including the cost of land, should be levied for establishment supervision and credited to Abstract K.—Sundry Earnings. This percentage will be held to cover the cost of tools and plant, except in special cases where it can be shown that expenditure on tools and plant amounts to more than $2\frac{1}{2}$ per cent. of the total cost, when the case will be dealt with on its individual merits :—

NOTE (1)—The rule above applies also to private sidings constructed by the Railway but in the case of such works the Railway Board may reduce this rate either generally or in specific cases, provided that the charges levied shall not be less than the cost to the Railway of the extra establishment employed by the Railway in each case.

NOTE (2)—The rules in this paragraph do not apply to works undertaken by Engineering workshops to which the rules applicable to works undertaken in workshops of the Locomotive and Carriage and Wagon Departments apply.

NOTE (3)—Railway Auxilliary Rifle Corps. The charges under the foregoing rules may be remitted in the case of works not exceeding Rs. 500 in cost executed by the Engineering Department of a railway for Auxilliary Rifle Corps connected with State Railways, provided that no additional establishment is entertained for such work.

110. In connection with joint works at joint stations no additional charge for supervision for the purpose of

Departmental Charges.

assessing interest as a charge to the Joint Station account shall be made to the Capital cost of joint works at junction stations owned by State-worked lines. The full application of this rule in the case of junctions at more than one point with a Company's line, where the junction stations are owned severally by the State and the Company's line, is dependent on both lines adopting the same procedure. If the Company's line levies such charges on joint works at junctions owned by them the State line should include a similar charge in connection with joint works at junctions owned by the State. This rule applies to all works undertaken after the 22nd April 1908.

111. All proposals for the construction of churches, cemeteries and clerical residences, in railway colonies should be submitted by the Head of the Railway Administration for the orders of the Railway Board. Expenditure on these objects are regulated by special rules.

Classes of Contracts.

CHAPTER VI.—Contracts.

Section I.—Classes of Contracts.

112. The recognised systems for carrying out work, otherwise than by the employment of daily labour, are "Piecework" and "Contract work." Piecework is that for which only a rate is agreed upon without reference to the total quantity of work to be done, or the quantity to be done within a given period.

113. The term "Contract" as used in this Code, does not include Piecework, nor does it include mere ordinary purchases of materials or stores. For such classes of agreements it is left to Heads of Railway Administrations to frame such subsidiary rules as may be suitable to the special circumstances of each Railway. Certain restrictions, however, have been placed on the powers of Engineers-in-Chief to enter into Piecework contracts. These are stated in the Book of Financial Powers of Officers of the Railway Department.

114. Contracts are usually of three classes—

- I.—Works of construction or repair under supervision in which the Contractor undertakes to provide the whole or part of the labour, material or plant required by the Engineer, and to perform the work under his direction.
- II.—Supply of materials.
- III.—Maintenance, in which the Contractor engages to maintain certain works in a specified condition of efficiency. This kind of contract is admissible in exceptional cases only.

115. Contracts of each class may be of three kinds, *viz.*, Lump-sum, Schedule, and a combination of these two.

116. In a lump-sum contract the Contractor engages to execute the work with all its contingencies for a fixed sum. A purely lump-sum contract is not of

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frequent occurrence, as it is generally necessary to provide for alterations in the original design which subsequently may be found necessary.

117. Schedule contracts are those in which the Contractor undertakes to execute the work at fixed rates, the sum he is to receive depending on the quantities and kinds of work done or materials supplied.

118. The third kind of contract is a combination of both these. Thus a fixed sum is proposed for the completion of the work as specified, and a schedule of rates is agreed upon by which to regulate the price to be paid, or to be deducted, for additions or alterations.

Section II.—Contract Documents.

119. Before a work is given out on contract the Executive Engineer shall prepare "contract documents" to include—

- 1st.—A complete set of drawings showing the general dimensions of the proposed work, and, so far as necessary, details of the various parts.
- 2nd.—A complete specification of the work to be done and of the materials to be used, unless reference can be made to some Standard Specification.
- 3rd.—A schedule of the quantities of the various descriptions of work.
- 4th.—A set of "conditions of contract" to be complied with by the person whose tender may be accepted.

120. If the amount of tender is likely to be beyond the Executive Engineer's power to accept, or to be of an unusual character, he should, before publicly inviting tenders, submit the contract documents to the Engineer-in-Chief for his approval or remarks, together with a copy of the proposed advertisement for tenders, and the form in which tenders are to be submitted. If the amount of tender is likely to exceed the Engineer-in-Chief's power of acceptance, or to be of a very special nature, that officer will in like manner, submit the con-

Contract Documents.

tract documents to the Agent or the Railway Board, as the case may be for approval.

121. In framing contracts of any description, care should be taken to retain in the hands of Government the supply of English materials, if required, to any considerable extent, and to arrange the terms accordingly. Such stores would be supplied either from the existing Government stock or obtained in ordinary course by indent on the Secretary of State or by purchases in the local market.

122. In cases where the Engineer-in-Chief considers it desirable to do so owing to the complicated nature or magnitude of the works the contract deeds should be specially prepared by the Government Law Officers, but for ordinary contracts, including all such as are based on tenders within the competence of an Engineer-in-Chief or Agent to accept, the ordinary forms, which may have been approved, will generally suffice.

123. All contract deeds must be executed on one or other of the standard forms, but they may be modified to suit local requirements after consultation with the legal advisers of Government. It is necessary that the units of work from which amounts due are calculated on each individual item in an agreement should be beyond dispute, and in order to guard against mistakes or overpayments all agreements should show all units of calculation and rates in words as well as in figures, and all copies of agreements should be rigorously examined, compared and signed by competent authority who should certify the copies accordingly.

124. Forms of deeds and other documents ordinarily required will be settled by the Law officers of the Government and furnished through the officer in charge of construction to whom all applications on such matters should be addressed.

Note.—All agreements entered into with the Railway Department by contractors for the execution of work or for securing the due performance of contracts are exempt from stamp duty.

Tenders.

Section III.—Tenders.

125. Tenders, which should always be sealed, should invariably be invited in the most open and public manner possible, whether by advertisement in the Government Gazette or local newspapers or by notice in English and the vernacular posted in public places and tenderers should have free access to the contract documents. The notice should in all cases state—

1st.—The place where and the time when the contract documents can be seen, and the blank forms of tender obtained; also the amount, if any, to be paid for such forms of tender.

2nd.—The place where, the date on which and the time when tenders are to be submitted and are to be opened (in the case of large contracts this should be at least one month after the date of the first advertisement or notice).

3rd.—The amount of earnest money to accompany the tender, and the amount and nature of security deposit required in the case of the accepted tender.

4th.—With whom, or what authority, the acceptance of the tender will rest.

A authority should always be reserved to reject any or all of the tenders so received without the assignment of a reason and this should be expressly stated in the advertisement.

126. For lump-sum contracts, the tenders should be in Form No G. In the case of schedule contracts, there are the following alternatives:—

(a) Tenders may be required to be made at a percentage above or below the rates in the Executive Engineer's estimate, in which case a schedule of the estimated rates should be attached to the specification, and the tender should be in Form F, or

(b) If it is considered preferable not to give information as to the estimated rates, the tenderers should be required to quote rates for the different items of work, and in this case the tender should be in a form similar to Form K-1 with suitable modifications.

Tenders.

In the case of piece-work when the nature of the work is simple, Form K-2 will be found suitable.

127. When the work partakes of the nature of both a lump-sum and schedule contract, a form of tender can be framed by combining Form G. with Forms F. and I. Form H. is a convenient form of tender for the supply of materials.

128. At the advertised time and place, all tenders received for the same contract shall be opened by the Executive Engineer or other officer in person, in the presence of such of the intending contractors or their agents as may choose to attend. No tenders shall be entertained from parties directly or indirectly connected with the Government service.

129. As a rule, no tender for the execution of works of any description should be received unless accompanied by the deposit of cash as earnest money, to the extent which has been notified as necessary by the Executive Engineer or other officer.

130. The amount of earnest money to be deposited should be sufficiently large to be a security against loss, in case of the Contractor failing to furnish the required security within the appointed time after the acceptance of his tender, or until the sums due to him form a sufficient guarantee, as the case may be.

131. Usually the lowest tender should be accepted unless there be some objection to the capability of the Contractor, the security offered by him, or his execution of former work. At the same time the acceptance or rejection of tenders is left entirely to the discretion of the officer to whom the duty is entrusted, and no explanation can be demanded of the cause of the rejection of his offer by any person making a tender. Such an explanation may be called for by superior authority if considered necessary.

Miscellaneous Rules.

Section IV.—Miscellaneous Rules.

132. Security, accompanied by a bond where necessary, should in all cases be taken for the due fulfilment of a contract. This security may be—

- (a) A deposit of cash where the amount does not exceed Rs. 500, Government securities, Municipal Debentures, Port Trust Bonds, and Deposit receipts of recognised banks (approved of by the officer in charge of construction) which publish regular accounts.
- (b) Post office 5-year cash certificates for the amount at which the certificates were purchased, but not their face value.
- (c) A deduction of 10 *per cent.* from the monthly payments to be made on account of work done.
- (d) Personal security of two persons of known probity and wealth.

133. When the bond is for more than Rs. 5,000, Form L. must be used; in all other cases and when sureties are dispensed with, Form L-1 should be used.

134. The employment of Contractors for the performance of any work in no way relieves the Engineer or other officers from responsibility as to the manner or time in which the work is done. Contracts framed agreeably to the foregoing rules give the Engineer full power to act for himself in cases in which the Contractor delays or fails to do the work to his satisfaction.

135. Every officer or subordinate in charge of a work carried out under contract should furnish to the Executive Engineer at the beginning of each month a Progress Report of work done during the previous month together with a return of all the materials at site on the last day of the month. And no such officer or subordinate should be relieved of his charge until after a careful inspection by his superior officer, or under the certificate granted by the relieving officer.

Miscellaneous Rules.

136. Engineers and their subordinates are responsible that the terms of contracts are strictly enforced, and that no act is done tending to nullify or vitiate a contract.

137. A "Manual for the guidance of officers of the Public Works Department in their relations with Contractors" has been published for the general guidance and assistance of executive officers. The instructions contained in it must, however, be followed subject to the orders which require a reference to competent authority before entering upon legal proceedings.

Lines under Construction.

Chapter VII.—Control over Expenditure.

Section I.—Lines under Construction and Open Line Works estimated to cost Rs. 18 lakhs, or more.

138. No transfer of the provision from or to the following main heads in the construction estimate (which will be referred to hereafter as the “reserved” heads) —

- I.—Preliminary expenses,
- II.—Land,
- VI.—Electric Telegraphs,
- X.—Ferries,
- XI.—Rolling Stock,
- XII.—General Charges,
- Z.—Miscellaneous (Other charges permitted as a debit to Capital in terms of relevant contracts),

may be made without the prior sanction of the Railway Board, but Engineers-in-Chief have full power to make transfers between sub-heads under the same main head.

With regard to the remaining main heads—

- III.—Formation,
- IV.—Bridgework,
- V.—Fencing, etc.,
- VII.—Ballast and permanent-way,
- VIII.—Stations and Buildings,
- IX.—Plant,

which collectively may be called the “engineering heads,” the Engineer-in-Chief has full power, except as limited by paragraph 140 to operate within the aggregate provision for these main heads, irrespective of the sections or divisions into which the line may have been divided. When expenditure chargeable to revenue

Lines under Construction.

has been sanctioned, its amount may also be included in the total of the engineering heads within which the Engineer-in-Chief has power to operate, subject to the proviso that the method of allocation approved by the Railway Board may not be modified without a reference to that authority.

139. Audit of expenditure will be conducted against gross sanctioned estimates for individual works, but any undue delay in the realisation of credits for returned materials, etc., should be brought to the notice of the administrative authority and the Accountant General, Railways, by the Chief Auditor. Expenditure is not to be regarded as technically objectionable unless the aggregate provision for "engineering heads" or the provision for any of the "reserved heads" is exceeded.

140. The exercise of the powers of an Engineer-in-Chief under paragraph 138 is subject to the following fundamental rule:—

No expenditure or liability may be incurred on any work which introduces a material modification in the project as sanctioned, without the prior sanction of the Railway Board. The responsibility for strict compliance with this rule rests upon the Engineer-in-Chief.

141. The following may be taken as *instances* of what the Railway Board will consider material modifications of a sanctioned project:—

- (a) Any change in the alignment likely to affect the facilities offered to the public in the neighbourhood or the interests of other railways, or likely to make any practical difference in the length of the line.
- (b) The introduction of any new station or the omission of any station.
- (c) A change in the lay out of a yard affecting the general method of working, or increasing, or reducing the number of trains that can be dealt with simultaneously.

Lines under Construction.

- (d) Any alteration in the type or number of engines or vehicles provided in an estimate for rolling-stock.
- (e) Any alteration in the standard of permanent-way or strength of bridges.
- (f) Any of the following involving a sum of Rs. 25,000 :—
 - (i) The omission or introduction of fencing.
 - (ii) An alteration in the facilities provided for any department of the railway or the public.
 - (iii) Any change in the amount of rolling-stock it is proposed to purchase for construction purposes chargeable to head IX (b).

Supplementary and Revised Estimates.

142. When any material modification in a project as sanctioned by the Railway Board, is thought necessary, even when no excess in the amount, of the sanctioned estimate is likely to result from its introduction, a detailed estimate of the cost of the modified works contemplated, must be submitted to the Railway Board, together with a comparative statement showing what alteration it will be necessary to make in those parts of the construction estimate which are affected. No liability may be incurred on the modified works nor, if a saving results from the adoption of the modification, may the saving be utilised for other works, until the proposed modification has received the approval of the Railway Board.

143. Executive Engineers are held responsible for bringing to notice any reasonable probability that an estimate, either under the total of the engineering heads or under any of the reserved heads, will be exceeded. When Engineers-in-Chief are satisfied that such a

Lines under Construction.

reasonable probability exists, they must, at the earliest opportunity, submit, for the orders of the Railway Board, revised estimates under the head or heads affected, at the same time making proposals for a transfer of provision from or to the heads over which they have no authority, when such a transfer is possible. In these revised estimates full details must be given in the case of all works estimated to cost more than Rs. 25,000 each in respect of which an excess exceeding 10 per cent. of the original provision is likely to occur, and the reasons for all such excesses must be clearly but briefly explained.

144. Revised estimates must invariably be accompanied by a comparative statement showing the excess or saving under each sub-head of account, against the latest sanction of the Railway Board. In cases where a supplementary estimate, or a previous revised estimate, has been sanctioned by the Railway Board, it should be made clear how the original sanction has been altered by such further sanctions. But in the case of a revised estimate, which requires the sanction of the Secretary of State, the comparison should be made with the last estimate which was sanctioned by that authority.

Financial Review.

145. From the commencement of a work, a review showing the financial position at the end of each financial half-year must be submitted to the Railway Board. This review should be prepared in the prescribed Form and reach the Railway Board before the 30th June and 31st December following the close of the half-year reviewed. When, in connection with a new Project it is necessary to provide rolling-stock, financial reviews should take into account expenditure against the estimate for such rolling-stock. Reviews are not, however, required of expenditure against estimates for additions to open line rolling-stock.

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146. In the "remarks" column of the financial review any anticipated excess of not less than Rs. 5,000 and 10 per cent. over the provision under sub-heads of account should be explained briefly and, at the same time, the anticipated date of submission of a revised estimate should be stated, when the Engineer-in-Chief considers an excess over the estimate for the engineering heads or for any of the reserved heads reasonably probable, as explained in para. 142.

147. The financial review should, in all cases, deal with the total cost of the project, irrespective of its distribution between Capital and Revenue.

Control of expenditure against grants.

148. Separate Capital grants will be allotted for each construction project. These separate grants will continue to be allotted until the works are completed and the completion report has been submitted. Funds intended for outlay in England and in India, for expenditure on rolling-stock and, at discretion of the Railway Board, for other special purposes, will be separately specified.

149. Re-appropriations cannot be made to or from the funds so allotted without the sanction of the Railway Board; subject to this restriction, Engineers-in-Chief have full power to distribute and re-appropriate the funds at their disposal for open line Capital expenditure and for each construction project between all heads whether "engineering" or "reserved" and between "works" and "stores."

150. Formal audit will be conducted against the grants as distributed by the Railway Board and expenditure in excess of these sums will be regarded as objectionable.

• 151. The Form D (return of grants, etc.) prepared monthly by the Audit Officer enables the progress of

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expenditure against grant to be reviewed. Audit Officers are responsible for taking every means in their power to insure the reliability of these returns, and they should be assisted in this duty as far as possible by the Engineer-in-Chief.

152. On grants being allotted, the Engineer-in-Chief, after providing for any reserve which he considers it necessary to retain at his own disposal, should distribute the balance of the Indian grant among the pending agencies under his orders in India. This distribution and all subsequent re-appropriations should be intimated to the Audit Officer.

153. The Audit Officer will regulate accordingly his issues of letters of credit in favour of the disbursers. The disbursing officers will be responsible for bringing promptly to the notice of the Engineer-in-Chief any probability of an excess over the grants allotted to them.

Applications for letters of credit submitted by disbursers to Audit Officers, should show the sanctioned grant, approximate expenditure to date, estimated liabilities remaining to be adjusted by transfer and the balance of grant available for cash expenditure. Immediately an excess over the grant allotted to a disburser comes to the notice of an Audit Officer through the monthly application for letters of credit and Form D (return of grants, etc.), he should inform the Engineer-in-Chief whose duty it will be to arrange for Funds.

Procedure in case of excesses.

154. When, through failure to observe the foregoing rules, it is discovered in audit that the provision in the sanctioned estimate under any reserved head or under the total of the engineering heads has been exceeded, or that liability has been incurred up to an amount in excess of the grant sanctioned by the Railway Board,

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the Audit Officer must at once report the matter to the Engineer-in-Chief. A report should also be forwarded to the Accountant General, Railways, by the Audit Officer immediately the excesses come under his cognisance. On receipt of such a report the Engineer-in-Chief must at once prohibit to the utmost extent practicable, the incurrence of further liability on work under the head or works affected until the removal of the irregularity. A copy of these orders should be forwarded to the Railway Board, and followed at the earliest possible date, by a full report of the circumstances under which the irregularity has been allowed to occur, and an application for the sanction of the Railway Board to the steps necessary to remove it. Disbursing Officers are not, however, to withhold payments required to liquidate liabilities which have already been incurred at the date of reporting the excess, and they may also make payments in respect of salaries, labour pay sheets or other pressing claims on the express orders in writing of the Engineer-in-Chief, a copy of such orders being forwarded to the Audit Officer and the Railway Board.

Completion Estimates.

155. The construction estimate should be closed at the end of one of the first three financial half-years after the date of opening as may be convenient and a completion estimate, countersigned by the Audit Officer prepared.

- 156 Completion estimates, which involve any material modification in a project as sanctioned by the Railway Board or an excess over (i) the total of the engineering heads of the construction estimate, or (ii) any of the reserved heads of the construction estimate should be submitted for the sanction of the Railway Board; completion estimates which involve no such
- modification or excess, may be sanctioned by the Railway Administrations concerned, the Railway Board being informed when sanction has been

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accorded and an abstract of the completion estimate being at the same time forwarded for the Board's information. The completion estimate should reach the authority competent to sanction it within four months after the close of the financial half-year up to which it showed actual expenditure. The date of opening in the case of a new line should be held to be the date of opening for passenger traffic of the whole line included in one construction estimate, but if different sections of a project are likely to be opened at intervals exceeding one year, separate completion estimates should be submitted for each section. In the case of an open line project the date of opening in this connection is to be held to be the date on which the project fulfils the purpose for which it, when sanctioned, was intended. Audit Officers should refer doubtful cases through the Accountant General, Railways, to the Railway Board.

157. A completion estimate is to show the estimated outlay on those works only which are already in progress or completed on the date of closing of the construction estimate. All works not started on that date should be dealt with separately as open line works both as regards estimates and expenditure, and in forwarding estimates for sanction for works in connection with new lines opened, it should be clearly indicated whether the cost of the work is chargeable to capital, construction, or open line Capital. Actual expenditure on all works up to date of closing of the construction estimate must be shown in the completion estimate. In the case of works in progress on that date, in addition to showing the actual expenditure, the anticipated further outlay and total estimated cost must be shown.

158. No financial review need be submitted to the Railway Board for the half-year during which a completion estimate is submitted for sanction but after the submission of such completion estimate, financial review should continue to be submitted half-yearly as previously

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until all the works shown in the completion estimate have been completed and a completion report has been submitted.

159. The completion report should be submitted as soon as possible after the works shown in the completion estimate are finished, and should indicate the total actual cost of the project including the amounts charged to Revenue under the several heads, abstracts and sub-heads of account. It should be accompanied by a comparative statement showing the traffic originally anticipated and that actually obtained. It should also show the actual cost of all works in the same degree of detail as is required in the construction estimate submitted to the Railway Board.

Currency of sanction.

160. The sanction to a construction estimate will remain current for five years after the date on which it has been accorded, unless it has been renewed for a further term by the acceptance of a revised estimate or a completion estimate. But if the project has not been commenced within two years of the date of according sanction to the construction estimate, the sanction will cease to be current at the end of that period.

Grouping.

161. When two or more works are so connected, either by their situation or by the purpose or purposes which they are designed to serve, that the construction of one necessarily involves that of the other or others, the works should be considered as one scheme and the aggregate estimated cost of the works so connected should determine the authority competent to sanction expenditure on the scheme. When the works constituting a connected scheme are situated in more than one executive

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district separate detailed estimates should be prepared of the cost of the work in each district in order that the Executive Engineer entrusted with actual construction may be in a position to watch expenditure against a sanctioned estimate of the cost of the work in his district.

Section II.—Open line works costing less than Rs. 18 lakhs.

Control over expenditure against estimates.

162. The ordinary rule is that no liability or expenditure may be incurred on a work until a detailed estimate for it has been sanctioned by competent authority but this rule does not apply to ordinary revenue expenditure in respect of which it is left to the discretion of the Agent to prescribe in what instances, if any, detailed estimates should be prepared.

163. In addition to the exception mentioned in para. 162, the following are the only classes of work on which expenditure or liability may be incurred prior to the receipt of sanction of the authority competent to sanction the estimates under the ordinary rules—

- (i) *Works, the expenditure on which is classed as Programme Revenue or debitable to capital, wholly or partly, which are considered to be urgently necessary to safeguard life or property or to repair damage to the line caused by flood, accident or other unforeseen contingency, so as to restore or maintain through communication.*
- (a) The Executive Engineer, may authorise the commencement of the work, but must at once submit a report to the Chief Engineer showing the description of the work, date of its commencement, the circumstances which bring the work within this category, the maximum probable cost of the work and the date by which a detailed estimate of cost will be submitted. The Executive Engineer must at the same time send a copy of this report to the Chief Auditor.

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- (b) The Chief Engineer, on receipt of such a report, must inform the Chief Auditor, through the Agent if the amount likely to be involved will exceed his own powers of sanction, of his concurrence therein or of what modifications he considers necessary, and at the same time certify that the proposed date of submission of the detailed estimate is, in the circumstances of the case, the earliest possible.
- (c) When submitting for sanction the detailed estimates for such a work, the Executive Engineer must intimate the fact to the Chief Auditor stating the total amount involved. Should this intimation not be received by the date specified under clause (a) for the submission of the estimate or should the sanction of competent authority not be received within one month of that date, the Chief Auditor will, in the absence of a satisfactory explanation of the cause of the delay, make a full report to the Accountant General, Railways and send a copy of this report to the Agent, who must at once inform the Railway Board of the reasons for the delay.
- (ii) *Works not falling within (i) above, as for instance, works required to meet the immediate needs of traffic, which are considered by the Agent so urgent that they must be started before the earliest date by which detailed estimates could be prepared.*
 - (a) If the cost of the work is not likely to exceed his own powers of sanction, the Agent may authorise the commencement of work prior to the preparation of estimates. When the Agent accords sanction to the commencement of a work in such circumstances, in communicating this sanction to the Chief Auditor the information required under paragraph (i) a) must be supplied to that officer.
 - (b) If the cost is likely to exceed his own powers, the work may not be commenced without the consent of the authority competent to sanction the probable cost. The Agent when applying to the Railway Board for sanction to commence a work in such circumstances, must supply all the information required under rule (i) (a). The date by which a detailed estimate of cost will be submitted should also be intimated to the Chief Auditor.

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- (c) In all cases the procedure laid down in rule (i) (c) will *mutatis mutandis* apply.

164. The rules in paragraph 161 regarding grouping of works in one estimate are equally applicable to open line works costing less than Rs. 18 lakhs.

Note.—These rules which are intended for guidance in grouping for purposes of sanction should not be considered as over-riding those laid down in paragraph 48 in so far as grouping for purposes of allocation is concerned.

Excesses over sanctioned estimates.

165. No material modification in a work or scheme as sanctioned, should be permitted or undertaken without the prior approval of the authority who sanctioned the estimate. In the case of estimates sanctioned by the Railway Board, or higher authority, the following may be taken as instances of what will be considered to be material modifications of a sanctioned work :—

- (a) Any modification of a sub-work, provided for in the estimate of a sanctioned work involving an additional outlay on that sub-work of more than Rs. 1,00,000.
- (b) The introduction of any new sub-work not provided for in the estimate of a sanctioned work involving an outlay of more than Rs. 1,00,000.
- (c) A change in the lay out of a yard affecting the general method of working, or increasing or reducing the number of trains that can be dealt with simultaneously.
- (d) Any alteration in the standard of interlocking.
- (e) Any alteration in the standard of permanent-way or strength of bridges.
- (f) The provision of additional facilities for any department of the railway or the public, involving an outlay of more than Rs. 1,00,000, or the omission of such facilities when originally provided.
- (g) An alteration in the number of units provided in an estimate for rolling stock. Any modification of types of rolling stock entered in an estimate if the

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modification involves an excess over the sanctioned estimate. If no excess is involved, the modification should be reported for the information of the Railway Board.

166. Any modification of a scheme sanctioned by the Railway Board or higher authority other than a material modification may be sanctioned by the Agent or Chief Engineer, or Locomotive Superintendent, or Carriage and Wagon Superintendent, provided that the amount of additional expenditure, if any, necessitated by such modification, does not exceed his financial powers of sanction (*vide* Railway Board's letter No. 204-W. 18, dated the 12th July 1918).

167. And provided that the financial powers of the Chief Engineer are not exceeded, Executive Engineers need not ordinarily refer to the Chief Engineer for orders proposals for the introduction of any modification which is necessitated by purely engineering considerations and which involve an outlay of less than Rs. 500.

168. The audit of expenditure against estimates will be conducted against the aggregate gross provision for the work or scheme, and not against the separate estimates for sub-works constituting the scheme. Due allowance should be made by the Chief Auditor, after consultation with the Heads of Departments, if necessary, for credits, if any, to be afforded to the work from time to time as work progresses.

169. District Officers should apprise the Heads of Departments of all excesses or the probability of excesses of over 10 per cent. or Rs. 10,000, whichever is less in the cost of any sub-work or of any individual work comprised in a scheme, and it will rest with the Head of the Department to decide what orders are to be issued regarding the preparation of a revised estimate of the cost of that sub-work or scheme, and he should send a copy of his orders to the Chief Auditor for guidance, informing him at the same time whether or not the excess will neces-

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sitate the preparation of a revised estimate for the whole scheme. When it becomes apparent that there is likely to be an excess over the sanctioned estimate of the cost of a whole work or scheme exceeding 10 per cent. or Rs.1,00,000 whichever is less, or that the cost of a work will exceed the powers of the authority which sanctioned the original estimate, a revised estimate must invariably be prepared and submitted, within three months of the probability of the excess becoming known, for the orders of the authority who has power to sanction the revised estimate. If, however, the work is in an advanced stage and is likely to be completed before a revised estimate can be got out, the fact of such excess or probable excess will be reported to the authority who has power to sanction the excess, and the excess will be dealt with in the completion report to be prepared and submitted as early as possible. Revised estimates must be prepared in the same degree of detail as the original estimates, in so far as sub-works on which an excess is anticipated are concerned. The reasons for excesses of over 10 per cent. must be clearly but briefly explained. Failure to act in conformity with these rules will be brought to the notice of the Head of the Department by the Chief Auditor, who will, if necessary also report the matter to the Agent.

170. As Railway Administrations have no power to sanction any excess over revised estimates sanctioned by the Railway Board or higher authority, the probability of an excess over such estimates should be reported immediately for the information of the Railway Board and a further revised estimate or completion report, as the case may be, should be submitted for sanction at the earliest possible date, an explanation being furnished in each case.

Control of expenditure against grants.

171. The foregoing rules deal with expenditure against estimates. It is also necessary that expenditure

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in each financial year should be covered by a budget provision or appropriation:

172. The Railway Board will allot to the Agent specific sums for expenditure in each financial year chargeable to Revenue and Capital under the following heads :—

Revenue	(a) Ordinary working expenses ;
	(b) Fuel.
	(c) Programme Revenue expenditure.
Capital	(d) Open Line Capital expenditure in England ;
	(e) Open Line Capital expenditure in India.

173 The Agent will thereafter distribute funds to spending departments under the following heads :—

- (a) Ordinary working expenses.
- (b) Fuel.
- (c) Programme Revenue expenditure of department concerned.
- (e) Open Line Capital Expenditure in India

{	Cash.
{	Stores.

174. From the funds placed at his disposal the Chief Engineer will make specific allotments for expenditure in each executive district under each of the heads (a), (c) and (e) cited in the foregoing paragraph, and the Executive Engineer will be responsible for making individual allotments for each work falling under class (c) or (e). Such allotments should be made before expenditure is incurred on the works concerned. The Executive Engineer is also responsible for seeing that no excess occurs over any of the several allotments sanctioned for expenditure in his district.

175. It is optional with the Agent to dispense with the procedure under which individual allotments are made by Executive Engineers for individual works. If

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this procedure is adopted full responsibility is placed upon Executive Engineers for control of expenditure against the total allotments under each head. In such cases it is essential that the rate of expenditure month by month should be watched by the Executive Engineer with the utmost care and that immediate steps should be taken by him either to retard progress on individual works or to obtain an additional allotment if he finds that the rate of expenditure will involve an ultimate excess over his existing allotment under any of the heads specified in paragraph 173 or prevent adequate progress on works the acceleration of which is likely to prove necessary.

176. A formal allotment of funds is not necessary in the case of an individual work or service continued from a previous year and likely to be completed in the current year with an expenditure not exceeding Rs. 500. In regard to the excesses over appropriations, items of excess not exceeding Rs. 500 need not be reported, or considered as objectionable as such small excesses will usually be counterbalanced by savings on other items and will not appreciably disturb the equilibrium between the Budget grant and expenditure. But for all excesses over grants of more than Rs. 500 on each work a specific additional appropriation should be made or applied for unless the official year has expired.

177. The sanction to an estimate will ordinarily remain current for five years from the date on which it has been accorded, unless it has been renewed for a further term by the acceptance of a revised estimate. Acceptance by competent authority however of a budget estimate which includes specific provision for expenditure on a work which is in progress, may be regarded as reviving for the year in which provision is made, the sanction to the estimate—regardless of the five years limit. But if no work has been commenced on a sanctioned scheme within two years of the date on which

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sanction was accorded to the estimate, such sanction must be held to have lapsed and fresh sanction must be obtained from the competent authority by the submission of an up-to-date estimate if necessary.

The currency of sanction begins from the date of sanction to the estimate itself and not from the date on which the allocation of the estimate is finally accepted.

Completion Reports.

178. A work or scheme should be considered as finished when it fulfils the purpose for which it, when sanctioned, was intended, and when there has been no expenditure thereon for three months thereafter. In all cases where excess expenditure is required to be regularised by sanction of the Railway Board or higher authority to the completion report of a work, the completion report should show the actual cost of all sub-works in the same degree of detail as was exhibited in the original estimate: also the allocation of the total actual cost of the project including the amount charged to revenue under the several abstracts, heads and sub-heads of account. In all other cases it is left to the Agent to prescribe whether, and, if so, in what detail, completion reports should be prepared.

List of Open Capital Sanctions.

179. Revised estimates and completion reports on which excesses are to be regularised should be countersigned by the Chief Auditor and must invariably be accompanied by a comparative statement showing the excess or saving on each sub-work against the latest sanctioned estimate.

180. Lists of all sanctions to open line capital estimates, showing the authority for each work, the progress made on it as compared with the estimate and allotment if any and the period for which the

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sanctions are current will be compiled by the Departments concerned and submitted to the Agent twice a year on dates to be prescribed by him. The lists of Open Capital sanctions need not be printed and on receipt in the Agent's office will be filed and kept for reference. Heads of Departments should send a duplicate of the typed return to the Chief Auditor.

Introductory.

Chapter VIII.—Procedure for Disbursements.**Section I.—Introductory.**

181. The procedure for the payment of bills on Construction Works and on Open Lines of railway differs considerably. On construction, bills are generally first paid by the Executive Engineer from funds placed at his disposal, and are thereafter audited by the Chief Auditor, while on Open Lines of railway the Executive Engineer usually has no funds at his disposal and he pays no bills but merely submits all his Labour Pay Sheets, Salary Bills, Contract Certificates, etc., for work done or material supplied to the Chief Auditor who first audits these documents and thereafter makes payment from his own drawing account.

182. The two systems are separately described in the following paragraphs which show—

- (i) Procedure to be followed when payments are made by an Executive Engineer from funds at his disposal (paragraphs 183 to 200);
- (ii) Procedure to be followed when payments are made by the Chief Auditor (paragraph 201).

In cases where the usual system applicable either to Lines under construction or Open Lines is departed from, the Chief Auditor will lay down detailed instructions to be followed by the Departmental officers concerned.

Section II.—Payments by Executive Engineers.

183. Executive Engineers are placed in funds by means of monthly Letters of Credit granted in their favour and they obtain money for disbursements solely by cheques against their Letters of Credit. Cash receipts which they realise are paid into the treasury vide paragraphs 196 and 197.

Payments by Executive Engineers.

184. Letters of Credit which have not been operated on or renewed in the meantime, lapse six months after the expiration of the financial year to which they pertain.

185. A Letter of Credit is the Executive Engineer's authority to draw, and the Treasury Officer's or Bank Agent's authority to cash, cheques up to its amount. The Treasury Officer debits the Executive Engineer with paid cheques only and credits him with the amount of the Letter of Credit.

186. Applications for Letters of Credit in Form No. 41D will be sent to the Chief Auditor on or before the 10th of each month for the amount of credit required during the succeeding month. To enable an Executive Engineer to furnish a close approximation of his requirements (line 12) each Sub-divisional Officer should be required to forward not later than the 5th of each month a memorandum showing the amounts of bills, Muster Rolls, etc., for which provision is required during the following month. Care should be taken that an amount included in the memorandum of one month is not repeated in that of a succeeding month though the bill or Muster Roll may not have been submitted for payment, as the Executive Engineers will have already made provision for it. But any appreciable increase or decrease in the amount of a bill or Muster Roll not submitted for payment should be entered in the memorandum. To these the Executive Engineer should add his own requirements in regard to salary, travelling allowances, purchases of stores, etc. Any amounts for which provision has been previously made but which have not been paid, should be excluded. Should no Letter of Credit be required for any month, this form must still be submitted, lines 12 to 15 of Part I being left blank, and the approximate account of expenditure in Part II being completed in order to enable the Chief Auditor to prepare the estimate of approximate receipts, expenditure, and unspent balances for the whole Railway.

Payments by Executive Engineers.

187. With the applications for credits for the months of December, January, February and March an extract from the Register of Liabilities in Form No. 41F should also be submitted.

188. No letter of advice of a credit having been granted will, as a rule, be sent by the Chief Auditor, except when a reduction in the demand of the Executive Engineer has been made. In case of funds not being available owing to the Letters of Credit not having reached the Bank or Treasury, the Executive Engineer will telegraph to the Chief Auditor, whose reply, to the effect that a Letter of Credit has been issued in his favour, will be authority for the Bank's Agent or Treasury Officer to cash cheques up to the amount specified by the Chief Auditor. A supplementary credit may be granted at any time to an Executive Engineer in addition to his ordinary monthly Letter of Credit, provided due cause is shown and the credit asked for will not entail any excess over grants placed at his disposal. Application for supplementary credits, especially applications by telegraph, occasion inconvenience, and should be avoided as far as possible.

189. When an Executive Engineer applies for a Letter of Credit by telegram he should follow up the telegram with a formal application in Form No. 41D, and an explanation of the reasons for the urgency of the application.

190. A Pass-book will be maintained, in Civil Account Code Form No. 63, in which will be entered the amount of the Letter of Credit granted in favour of the Executive Engineer and the cheques paid day by day to his order.

191. The Pass-book is a record of the Executive Engineer's office and should be kept there, but it should be sent periodically to the Treasury to be written up. The Pass-book of an Executive Engineer at the same station as the Treasury should be sent to be written up

Payments by Executive Engineers.

once a week ; that of an Executive Engineer at a distance may be sent at longer intervals, the dates being generally fixed in communication with the Treasury Officer, but in all cases the Pass-book must be sent immediately after the close of every month in view to the early preparation of the certificate referred to in paragraphs 192 and 193. In cases where an Executive Engineer has more than one banking account, a separate Pass-book is maintained for each account.

192. At the end of the month the Treasury Officer will furnish the Executive Engineer with a certificate as follows (Form No. 20B) :—

“ I hereby certify that the undrawn balance in the Pass-book of A. B., Executive Engineer, at end of _____ 19____ is Rs. 2,000.”

to which the Executive Engineer will subjoin a memorandum of cheques unpaid, as follows :—

Deduct cheques issued but unpaid, viz:—

	Rs.
No. 19, dated	150
No. 26, „	50
No. 15, „	70
TOTAL	270
Add balance as per my Cash Book	1,730
Balance as per Treasury Certificate	2,000

The original certificate will be forwarded by the Executive Engineer to the Chief Auditor.

193. An Executive Engineer may empower any of his Sub-divisional Officers, for whom a sub-divisional treasure chest has been sanctioned, to draw cheques against his Letter of Credit up to any limit which he may specify. In such cases the cheques of the Sub-divisional Officer should be marked by a distinguishing

Payments by Executive Engineers.

letter, and the memorandum of unpaid cheques will be prepared after the following form :—

Deduct cheques issued but unpaid, viz. :—

Of Executive Engineer—		Rs.
No. 19, Book No.—	.	150
No. 26, „ „	.	50
Of Assistant Engineer—		
No. 15A, Book No.—	.	80
No. 16A, „ „	.	60
TOTAL		340

Balance undrawn—

viz.—Of Executive Engineer	.	1,740
Of Assistant Engineer	.	720

Balance as per Treasury Certificate . . . 2,460

194. When funds are required for a subordinate at a different Treasury from that with which the Executive Engineer himself has a Drawing Account, the latter should obtain a Letter of Credit on that Treasury, and then empower his subordinate to draw against it. Funds should not be made available for such a purpose by means of Remittance Transfer Receipts.

195. An Executive Engineer or his Sub-divisional Officers may obtain funds when necessary from Sub-Treasuries by means of cheques, which should be distinguished by different numbers and letters from those drawn against the Treasury, and the number of the cheque book to be used should be communicated to the Sub-Treasury Officer through the Treasury Officer. In such case the Executive Engineer should give notice to the Treasury Officer, from time to time, of the probable amount of his drawings on each Sub-Treasury in order that funds may as far as convenient be provided. The cheques thus drawn will be entered by the Treasury Officer in the Pass-book against the Letter of

Payments by Executive Engineers.

Credit of the Executive Engineer, as if they had been drawn directly against the Treasury.

196. Cash which an Executive Engineer may realise will not be available for expenditure, but will be paid into the Treasury as soon as possible after realization to credit of Government in the Railway Department, and not to the credit of the Executive Engineer's Drawing Account. *Per contra* Credits in his Cash Book to such heads as Income-tax, Service Funds, etc., recovered by deductions from bills charged off on the expenditure side, are not to be paid into Treasury by the Executive Engineer.

197. Should an Executive Engineer, however, require to make use of cash receipts temporarily for current expenditure, he may do so; but before the end of the month, he must send to the Treasury a cheque for the amount thus made use of, and obtain a receipt from the Treasury for that sum, which will thus appear in the Treasury accounts as a receipt from the Railway Department, and in those of the Executive Engineer as having been paid into the Treasury. Such cheques should be drawn on the same Treasury in favour of the Executive Engineer himself, and endorsed by that officer with the words "Received payment by transfer credit to the Railway Department."

198. Miscellaneous receipts paid in need not be classified in the letter, warrant or book to the Treasury to receive them; but they must on recovery be specified in detail in the Executive Engineer's books and monthly accounts. All payments thus made will be entered in the Remittance Book (Form No. 20C), which should accompany the remittance. This book must be signed or initialled by the Accountant and Treasurer when the remittance is for Rs. 500 or under, and by the Treasury Officer when it exceeds that amount. When there are receipts which should be credited to Government, they should as received, be entered in the memorandum of

Payments by Chief Auditor.

payments into Treasury (Form No. 20C) concurrently with the entry in the Cash Book.

199. At the end of each month, a consolidated receipt for the remittances made during the month will be prepared by the Executive Engineer, in Form No. 20 D and sent with the remittance book to the Treasury Officer, who, after verifying the entries, will sign the book and the receipt, and return them to the Executive Engineer. The Executive Engineer will retain the book in his possession, but will attach the consolidated receipt to his monthly Account submitted to the Chief Auditor as a voucher for the payments into the Treasury.

NOTE.—The remittance book is not adapted for the case of remittances made to Presidency Banks of cheques paid in as Railway receipts. In these cases the entry should be made in the remittance book; but in the place for the treasury receipt should be entered "By Bank Cheques" and the book need not be sent with the remittance, provided that the cheques are always endorsed "Pay to the Bank of _____" or "Credit account of Government."

200. No officer or subordinate shall borrow money on account of Government without direct authority, except in cases of emergency, when the officers in charge of the Treasuries within reach certify that they are unable to meet his demands; and in these cases a report must at once be made to the Engineer-in-Chief.

Payments by the Chief Auditor.

201. The usual system on open lines of railway is that Departmental Officers have no concern with the actual making of payments, and consequently do not have funds placed at their disposal. All disbursements are made from head-quarters by the Audit Office through a staff of pay clerks.

Introductory.

Chapter IX.—Accounts.**Section I.—Accounts of Lines under Construction.****A.—INTRODUCTORY.**

202. For the convenient execution and supervision of work, every Division of a State Railway under construction will usually, with the sanction of the Engineer-in-Chief, be divided into two or more sub-divisions, each sub-division being in charge of a Gazetted Officer or Upper Subordinate.

203. When disbursements are made by Sub-Divisional Officers, they will usually be effected from a standing imprest, the amount of which may not exceed Rs. 1,000 without the special sanction of the Railway Board. But in exceptional cases where the Engineer-in-Chief considers it to be necessary, a Sub-Divisional treasure chest may be established, and funds for disbursement supplied either by transfers of cash from the Divisional cash chest, as required, or by means of drawing account against the Executive Engineer's Letter of Credit. In such cases the Sub-Divisional Officer will maintain a cash book, instead of an Imprest account and generally such other detailed accounts on the lines laid down for Executive Engineers as may be decided by the Engineer-in-Chief in consultation with the Chief Auditor.

204. A Sub-Divisional Officer on construction may, with the sanction of the Executive Engineer, make disbursements through any of his subordinates by means of an imprest; but its amount and the purposes for which granted are to be fixed in each case by the Executive Engineer.

205. The following are the primary or initial accounts maintained by Executive Officers. In addition

Muster Rolls.

there are the initial records in connection with stores transactions.

- (1) Muster Roll Form No. 2.
- (2) Measurement Book Form No. 6.
- (3) Cash Account Form No. 3. or No. 4.
- (4) Write-back Order Form No. 17.

B.—Muster Rolls.

206. The nominal Muster Roll, Form No. 2, or such other form as may be prescribed by the Engineer-in-Chief, is the initial record of the labour employed each day on a work, and must be written up daily by the subordinate deputed for the purpose.

207. Payments on Muster Rolls should be made or witnessed by the officer of the highest standing available, and he should certify to the payments individually or by groups by a distinctive mark, his initials, or signature. The amount paid on each date should be noted in words as well as in figures at the foot of the Muster Roll.

208. Unpaid amounts, should, in the case of a Muster Roll for men employed on several works be considered as relating to the most costly work in the group and subsequent payments of unpaid amounts should be debited to the work concerned if the accounts of the work are still open otherwise to the same Head of the Capital Account.

209. Unpaid amounts on Muster Rolls will be paid on extract Muster Rolls. In all such cases a counter reference should be made by the Disbursing Officer against the corresponding entry in the original Muster Roll. This precaution is necessary to avoid more than one payment.

210. Unpaid amounts on Muster Rolls will not be posted into the Registers or Accounts.

Measurements.

211. Muster Rolls need not pass beyond the office of the responsible disburser and they should never be prepared in duplicate.

212. In special and urgent cases, where labourers are employed casually for short periods, payment may, under a general rule of the Engineer-in-Chief, be made on a Muster Roll in which the names of the labourers need not be given, but such payments may only be made by a gazetted officer or an upper subordinate.

C.—Measurements.

213. The measurement book (Form No. 6) must be looked upon as a most important record, since it is the basis of all accounts of quantities, whether of work done by daily labour or by petty contract or by contract, or of materials received which have to be counted or measured. The description of the work must be lucid, so as to admit of easy identification and check.

214. For large works a separate measurement book may be set apart; or, if found convenient, two or more books may be set apart for different classes of work.

215. The pages of the book should be machine-numbered, and no page should on any account be torn out, nor should an entry be erased or effaced so as to be illegible. If a mistake be made, it should be corrected by crossing out the incorrect words or figures, and re-writing the words or figures, and the correction thus made should be initialled. The entries must be made directly in the measurement books at the site of the work. The copying of entries from another rough note book or similar record is strictly forbidden. A reliable record is the object to be aimed at, as it may have to be produced as evidence in a Court of Law.

216. The entries in the measurement book should, if possible, be made in ink; but when this is not possible, and entries have to be made in pencil, the pencil entries

Measurements.

should not be inked over, but left untouched. The "contents or area" should, however, be invariably inked in.

217. Where the Sub-Divisional Officer is a gazetted officer or an upper subordinate, and when he has authority to draw out the contract certificates or to make the payments, the details of measurements will not be submitted to the divisional office; but in other cases, the measurement book must be submitted to the divisional office, where an arithmetical check of the calculations will be carried out under the supervision of the Accountant.

218. From the measurement book all quantities should be clearly traceable into the documents on which payments are made, and a reference to the voucher in which the quantities are entered for payment, as well as the date of entry, should be given by an endorsement upon the original entries in the measurement book. No contract certificate or bill should be signed without thus crossing off the connected entry in the measurement book, and the document on which payment is made should invariably bear a reference to the number and page of the book in which the detailed measurements are recorded.

219. All the measurement books belonging to a division should be numbered serially and a register of them should be maintained in the divisional office showing the serial number of each book, the name of the person to whom issued the date of issue and the date of its return. A similar register should also be maintained in the sub-divisional office. The eventual return of all measurement books to the divisional office for record must be insisted on. They must be carefully preserved for twenty years. To ensure this, measurement books should be carefully listed and made over to the open line authorities when the construction divisions are closed.

Cash Account.

220. The Engineer-in-Chief is required to make it a special duty to see that measurement books are carefully kept and measurements properly recorded, and that they are complete records of each kind of work done for which certificates have been granted.

D.—Cash Account.

221. The Cash Account, Form No. 3, Imprest Account, or Cash Book, Form No. 4, is the primary record of the disbursing officer, upon which the whole of his accounts are based, and all other accounts and returns are subsidiary to them. The disbursing officer must therefore regard the cash account as a most important record: it must be posted day by day, with perfect accuracy in a clear and concise manner, and reference must always be made to the service or work for which the amount is received or paid, so that the cash transactions of the disburser may be clearly and precisely understood from it, and the different items easily traced through the accounts of the works.

222. The cash account must exhibit actual transactions under the dates on which they occur.

223. Each officer is personally responsible for the money which passes through his hands, and for the prompt record of receipts and payments in his cash account, as well as for the correctness of the cash account in every respect.

224. The private cash or accounts of members of the department are not to be mixed up with the public cash or accounts under any circumstances.

225. The term "cash" includes specie, currency notes, cheques payable on demand, demand drafts and remittance transfer receipts. A small supply of postage stamps may, when necessary, be kept as part of the cash balance. Government securities are not to be treated as cash.

Cash Account.

226. An imprest (or standing advance) is a sum of money given to an individual to enable him to make certain classes of payments for Government. The arrangements for the safe custody of the money rest entirely with the imprest holder, but he must at all times be ready to produce the total amount of imprest in vouchers or in cash.

227. The account is kept in duplicate, the counter-foil being retained by the imprest holder, and the original, supported by the necessary vouchers, forwarded to the officer from whom the imprest is held from time to time as the imprest holder finds it necessary.

228. The imprest account should be closed about the 27th of the month, and recouped before the end of the month so as to ensure, as many as possible, of the month's transactions being included in the divisional accounts. But if the imprest holder be not recouped before the end of the month, his expenditure subsequent to the latest recoupment will not be charged off in the cash book of the recouping officer, and the full amount of the imprest will be shown as outstanding in the balance of his cash book.

229. The cash book contains two money columns on each side of the account, for distinguishing between the receipts and payments of the Treasury Drawing Account and those belonging to the cash chest. When cash is drawn by cheque from the treasury to replenish the chest, the amount will be entered on the payment side in the "treasury" column, and on the receipt side in the "cash" column.

230. A payment made by cheque should only appear in the cash account of the officer who draws the cheque.

231. Cheques drawn in favour of contractors and others should, as a rule, be made over to them by the disburser direct but the occasional delivery of cheques through a subordinate may be permitted at the discre-

Cash Account.

tion and on the responsibility of the disburser. In such cases the subordinate makes no entry in any accounts which he keeps.

232. Recoveries of advances from hills, realizations of income tax, fund subscriptions and the like, should always be exhibited in the cash columns as receipts and the voucher from which recovered quoted in the voucher column, the full amount of the bill being charged *per contra* to the service head concerned.

233. When money is received on behalf of Government a receipt should be granted in Form No. 20 E.

234. These receipts will only be issued by Executive Engineers and Sub-Divisional Officers or any other officer specially authorised by the Engineer-in-Chief.

235. Receipt books will be issued by the Chief Auditor from time to time on indent. They should be treated as carefully as cheque books, and kept under lock and key in the personal custody of the responsible officer.

236. Applications for refunds should, as a rule, be entertained only when supported by the presentation of the receipt originally given. The receipt should be checked with the counterfoil and the entry in the cash book, a reference to the repayment should be written across the counterfoil in red ink, and a note made in the cash book against the entry of receipt, so as to prevent a double payment. The original receipt should also be destroyed by the disbursing officer.

237. Without the production of the original receipt, a repayment should not be made by a subordinate officer, except under special orders of the Executive Engineer. In all cases a receipt, stamped when necessary, must be obtained for repayments of money previously lodged with Government for whatever purpose.

Cash Account.

238. Erasures in the cash book are strictly prohibited. Errors must be altered by crossing the incorrect figures or words through, and inserting the corrected entries in red ink. The corrections thus made must always be initialled by the disbursing officer.

239. When an imprest advance is first made, the fact should be noted in red ink in the cash book of the officer making it in the column "to whom paid" but the amount should not be taken credit for as an actual payment as it will still be held to form a portion of the cash balance of the officer who issues it. Any subsequent increases or decreases in the amounts should be similarly noted, the increases on the payment side and the decreases on the receipt side of the cash account.

240. Money advanced to a subordinate for disbursements to labourers or others at a distance should be noted in red ink in the cash account on the payment side but not in the amount column just as in the case of regular imprests, until the subordinate returns the duly certified muster rolls or other vouchers and an account of his payments, with the unspent balance, if any. The payments are then to be charged off as if made by the holder of the cash account himself and the unspent balance replaced in his chest.

241. The payments appearing in the imprest account will be entered either individually or in abstracted form in the recouping officer's cash book, and the imprest account countersigned by the recouping officer may be the formal voucher for such entries; in this case the supporting vouchers need not be initialled by the recouping officer. It is, however, optional with the recouping officer to keep the imprest account and initial the sub-vouchers, submitting them as the vouchers of his cash book. Should any item in an imprest account appear to the recouping officer to be open to objection, the imprest should nevertheless be recouped in full, and the item placed under "Miscellaneous

Cheques.

Advances " until the objection is removed or the amount recovered from the imprest holder.

242. All entries in the cash book must be checked by the disbursing officer as soon as possible after the date of their occurrence, and he must see that all receipts have been properly credited in it, and that the payments are supported by vouchers which have been passed by him. The cash book should be initialled under the last entry checked.

243. The cash book should be balanced as frequently as convenient but it should always be balanced at the end of the month. It should be signed by the Disbursing officer whenever it is balanced and such signature will be understood as fixing his responsibility for all the entries of the month, inclusive of the closing balance. Whenever on the contents of the chest being counted the cash balance as per cash book is found to be incorrect it must, unless the error can be detected, be at once rectified by making the needful entry in the cash book. " To cash found surplus in chest " under Deposits or " By cash found deficient in chest on this date " under Miscellaneous Advances, as the case may be. The action to be taken on the occurrence of such deficiency must depend on the nature of each case.

E.—Cheques.

244. All payments should, as far as possible, be made by cheques on the treasury ; but no cheque should be issued for a sum less than Rs. 10. For the payment of petty items under Rs. 10, which cannot be made by cheques, small sums should be drawn from time to time from the treasury.

245. Before a cheque book is brought into use, its number should be communicated to the treasury officer on whom cheques are to be drawn.

Cheques.

246. Drawing officers are held personally responsible for the safe custody of all blank cheque books and for the correct drawing of all cheques.

247. As a precaution against fraud, all cheques should have entered across them at right angles to the type a sum in words, a little in excess of that for which they are granted, thus, "Under thirty rupees" will mean that the cheque is for a sum not less than Rs. 20, but less than Rs. 30, and so on.

248. All cheques shall be made payable "to order" except in cases where they are issued to persons not in Government employ, who desire to have them made payable "to bearer."

249. All cheques will hold good for three months from date of issue. If the currency of a cheque should expire owing to its not being presented at the treasury for payment within three months from the date of its issue, it may be returned to the drawer who will destroy it, and draw a new cheque in lieu of it. The fact of the destruction and the number and date of the new cheque will be recorded on the counterfoil of the old cheque, and the number and date of the old cheque that is destroyed will be recorded on the counterfoil of the new one. The fact of the new cheque having been issued will be entered on the date of issue in red ink parenthetically in the cash book, but not in the column for payment. A note will also be made against the original entry in the cash book.

250. When it is necessary to cancel a cheque, the cancellation should be recorded on the counterfoil, and the cheque, if in the drawer's possession, should be destroyed. If not in his possession, he should promptly request the treasury officer to stop payment of the cheque and on ascertaining that payment has been stopped, he should write back the entry in his cash book by exhibiting the amount of the cheque on the receipt side in the treasury column as "Refunds of Expenditure." A

Custody of Cash. Adjustments.

strictly forbidden. In order to guard against the overdrawal of credit, the amount of each cheque drawn should, on the reverse of the counterfoil of the previous cheque, be deducted from the undrawn balance and the reduced balance carried forward to the reverse of the next counterfoil.

F.—Custody of Cash.

254. Public money in the custody of the Department shall be kept in strong treasure chests. The Executive Engineer will be responsible for the issue of detailed orders as to the arrangements that should be made for the safe custody of cash.

G.—Adjustments.

255. Adjustments in accounts will be necessary—

- 1 On the return of materials from works to stores.
- 2 On the transfer of materials from one work to another.
- 3 On the discovery of an erroneous charge which should in a previous month, have been debited to some other estimate or head of account.
- (4 On the transfer of a debit or credit from one account to another, except in the case of adjustment in the divisional office of sums at debit or credit of a suspense head, *e.g.*, "Miscellaneous Advances" to or from a work or a final head of account.

256. The officer initiating the adjustment will fill in an order for a write-back in Form No. 17, as far as he is able to do so, and forward it to the divisional officer where it will be completed.

257. Officers ordering writes-back of the value of materials are responsible that materials transferred to other works are worth the sum at which they are charged, and that materials returned to store are in good condition, are likely to be used within a reasonable time and are priced not above market rates or the stock rates of the Railway.

Vouchers.

H.—Vouchers.

258. As a general rule every payment charged in the accounts of the Department must be supported by a voucher giving full particulars of the claim in respect of which the payment has been made. In all contractors' and store bills the units of calculation and rates should be entered in words as well as in figures.

259. Vouchers should bear, or have attached, an acknowledgment of the payment, signed by the person by whom or on whose behalf the claim is put forward.

260. In the case of articles supplied by value-payable post to a Government office, the value-payable cover together with a certified copy of the invoice will be accepted as a voucher.

261. In any case in which it is not possible to support a payment by a voucher, a certificate of payment signed by the disbursing officer, and endorsed if necessary by his superior officer, should invariably be recorded.

262. Duplicates, or copies, of receipts or vouchers in lieu of those alleged to be lost or missing should in no case be made or issued. If any necessity for such a document arises, a certificate may be issued to the effect that it is found from the accounts (or other records) that on a specified day a certain sum was received from or paid to A. B. on a certain account.

263. A certified copy of a receipted voucher which should be rigorously examined, compared and signed by competent authority who should certify the document accordingly, should be retained by the officer concerned whenever such a document is required to complete the records of the office, but the contractor or other claimant should not be required to sign such a copy.

264. No voucher for payment for articles purchased is valid, unless there be endorsed on it the receipt of the

Vouchers.

departmental officer for the articles delivered as well as the receipt of the vendor for the sum paid. This restriction however is not to be held applicable to payments for petty articles purchased from the bazar

265. In calculating the value of each item of work, the nearest anna should be taken, pies one to five being ignored and pies six to eleven taken as one anna; but pies must not be omitted from the rates. This rule may be extended to all payments of the railway.

266. The amount admitted and paid on all bills must be expressed in words and figures in the receipt on the bill. Every voucher must bear a pay order and, if a bill is paid in part only, the pay order must be expressed in words and figures. The printed endorsement on each voucher shows that if paid in full the disbursing officer need only initial and date one of the alternative remarks.

NOTE.—It will suffice if the amount of whole rupees is entered in words followed by the annas and pies in figures.

267. When the payee signs in the vernacular, the amount acknowledged should also be noted in the vernacular as well as in English.

268. In the case of payees who can neither read nor write, or who cannot write beyond signing their names, their marks or seal should be attested by two competent witnesses, in whose presence the nature of the payment should be fully explained. When, however, a thumb impression is taken the attestation by a single witness will be sufficient.

269. As a general rule, vouchers should be prepared in English, but a document which is in the vernacular will be accepted as a valid voucher, provided that it bears a brief note of the particulars in English, entered by an officer not under the standing of a Sub-Divisional Officer.

270. Suppliers of stores should be encouraged to submit their bills in departmental forms, but bills

Accounts to be rendered by Sub-Divisional Officers.

in their own forms when prepared in English may be accepted, the necessary particulars required by the departmental form being added by the disbursing officer.

271. No fees should ever be charged either for forms of bills supplied, or for clerical assistance rendered in the preparation of bills; a contractor requiring a copy of his contract certificate or an extract from his account in the contractor's ledger should be furnished with the same, a nominal charge, as a rule not exceeding one rupee, may be made at the discretion of the officer supplying the information and should be credited to Government as a miscellaneous receipt under Receipts on Capital Account.

272. Payments may be made to contractors, for work done or supplies received, on Form Nos. 14, 15 or 16. Receipts for payments "on account" may be taken either on the detailed contract certificate (Form No. 14 on white paper) or Form No. 15 in which the account of several contractors may be included.

273. Form No. 14 should be locally printed both on white and yellow paper in the vernacular, as well as in English, the form on yellow paper being for use when final payments are made to contractors on closing running accounts. In all contractors' work and store bills the units of calculation and rates should be entered in words as well as in figures. This applies to both Construction and Open Line.

I.—Accounts to be rendered by Sub-Divisional Officers.

274. The following accounts and returns will be submitted by Sub-Divisional Officers to the Executive Engineer:—

- (1) Imprest account supported by all necessary vouchers; on the 27th of each month and at such other intervals as a recoupment of imprest is necessary.

Stores, Tools and Plant.

- (2) *Account of Receipt and Issues of materials Form No. 7F.*—This return will be submitted for each month and in time to reach the Executive Engineer not later than the 10th of the month succeeding that to which it relates.

A separate account should be prepared for each collection of materials at site of particular works the accounts of which are kept by sub-heads.

- (3) Write-back orders. Whenever necessary.
(4) Yearly Balance Return of Tools and Plant Form No. 13.
(5) Supplement to the Balance Return of Tools and Plant Form No. 42 E.

J.—Stores, Tools and Plant.

275. The custody of all stores will be vested in the Stores Department, and Executive Engineers will not be required to take charge of them until they are received for immediate consumption on the works.

276. The Stores Accounts of the Executive Engineer will therefore be limited to an account of the total stores received each month, showing their distribution over the different works on which they have been expended.

277. Issues from Depôt Stores and from the General Stores Depôt will be collected by the Audit Office in a Daily Summary. A copy of the Daily Summary will be sent daily to the Executive Engineer. From the Daily Summaries monthly account of issues will be prepared and forwarded to the Executive Engineer for verification and acceptance. The Monthly Account can readily be checked from the Daily Summaries.

278. It will suffice if the total of the Monthly Account of Issues or the amount accepted, without details, be entered on the receipt side of the monthly Stores Account (Form No. 29). Receipts from other divisions will be detailed.

Stores, Tools and Plant.

279. Stores obtained by manufacture need not be passed through the Stores Accounts if they are utilized immediately on some work. In all other cases they must be passed through the books of some depôt and will appear in the Executive Engineer's accounts as receipts from that depôt.

280. The total issue of stores to be shown on the issue side of the Monthly Stores Account, will, of course, agree with the total value of the receipts. Only the total value of the issues to each main head of account will be entered in this account the details being given in the account of each work.

281. Purchases by the Executive Engineer of articles for immediate consumption will not be carried through the stores accounts, but will be charged off at once in the accounts of the works.

282. Materials at site should be verified at least once a year, and a certificate of the balance and report of the results of verification be forwarded to the Chief Auditor by the Executive Engineer.

283. A yearly Balance Return will be submitted by Executive Engineers of Tools and Plant in their Divisions, in Form No. 13; this should be supported, for surveying and mathematical instruments, by a detailed list in Form No. 12 E. giving the particulars of each instrument, its distinguishing number or other mark, the date of receipt in the division, and its condition. In regard to cases of mathematical instruments, the component instruments should be specified, and it should be stated whether they are all complete; and if not complete, the report should mention the steps taken to recover the missing parts from the persons responsible. The audited return for the previous year will accompany the return sent to the Chief Auditor for audit, and both copies will be returned to the Executive Engineer.

Manufacture Accounts.

284. After examination, and before returning the return of Tools and Plant, the Chief Auditor will prepare an annual statement in Form No. 42 E. showing, by divisions, the whole of the surveying and mathematical instruments on the stock of the Railway. This statement will be submitted to the Engineer-in-Chief who will decide whether any redistribution of the instruments should be made, and which of the instruments that may not be in use should be returned to one of the instrument depôts.

285. When Stores or Tools and Plant are lost a special report must be made to the Engineer-in-Chief of the Railway by the Officer-in-charge through the proper channel. Where there is reason to suppose that the loss is due to criminal action, an immediate report must be made to the police also, and proper steps taken for the recovery of the property. When an enquiry is held by the police authorities or others, the Executive Engineer or Controller of Stores must obtain and forward a copy of the proceedings, as soon as possible, to the Engineer-in-Chief.

K.—Manufacture Accounts.

286. The Engineer-in-Chief of each Railway has power to authorise expenditure on manufacturing operations on his own responsibility, up to the limits of sanctioned estimates for works. He may also, on his own responsibility, delegate powers, on like conditions, to Superintending and Executive Engineers up to the limits of the sanctioned estimates for the portions of the line, or works, respectively, in their charge.

287. When several works of a similar nature on any section of a line have been sanctioned in one estimate by the Government of India, or the Railway Board it is not necessary that the Engineer-in-Chief should specify the several individual works for which

 Manufacture Accounts.

manufacture operations are authorised by him. In such cases it will be sufficient for him to authorise expenditure up to a certain limit against each estimate.

288. Accounts of the manufacture or collection of materials will be maintained in the Register of Works, each operation being treated as a separate work, and the charges arranged under such sub-heads as will admit of the progressive stages of the manufacture being clearly exhibited. The operations on the undermentioned manufactures might, *e.g.*, be shown under the following sub-heads :—

Brick manufacture.

1. Moulding.
2. Loading.
3. Firing (labour).
4. Cost of fuel.
5. Unloading and stacking.
6. General charges.

Lime manufacture.

1. Labour in burning.
2. Cost of stone or kunḍur.
3. Cost of fuel.
4. General charges.

Sarkki manufacture.

1. Labour in pounding
2. Cost of brickbats.
3. General charges.

Preparatory sawmill work.

1. Labour in sawing.
2. Cost of logs.
3. General charges.

Manufacture of crank-shaft.

1. Labour
2. Cost of iron.
3. Cost of fuel.
4. General charges.

289. A manufacture account is a suspense account in which the debits consist of the actual outlay arranged under suitable sub-heads as above, and the credit entries are arrived at by pricing the actual quantity of materials manufactured, at such approximate rates as will cover the total charges after allowing for wastage. Any difference that may exist between outlay and value of outturn on closing each operation, must be debited, or credited to works under the authority of the Engineer-in-Chief.

Workshop Accounts.

290. It will usually be found necessary in each manufacture account, to provide one sub-head for General Charges, under which would fall such charges as for the erection of sheds or clearing grounds for brick-making, the construction of kilns for lime manufacture, etc., etc., which would be transferred under the orders in the following paragraph to the debit of the operation. Such charges should, however, be reduced to a minimum, and, as far as possible, all outlay should be exhibited under some specific sub-head of operation.

291. Each manufacture account will be charged with all the current expenditure incurred upon it, and will be credited with the outturn month by month.

292. The progress of manufactures must be clearly reported in such form as the Executive Engineer or the Engineer-in-Chief may require to show the progress of work.

L.—Workshop Accounts.

293. No works other than those necessary to meet the actual requirements of the Railway may be undertaken in State Railway Workshops without the previous permission or general sanction of the Engineer-in-Chief.

294. For all works, estimates should, as a general rule, be prepared by the Workshop Department, and accepted by the officers or parties ordering the works, before the works are put in hand. It will rest with the Engineer-in-Chief to fix a limit for petty works within which the preparation of estimates may be dispensed with. The estimates must clearly show the amounts of the percentages added under the rules.

295. The rules on the subject of workshop accounts in the General Codes apply to all works undertaken in Workshops of State Railways under construction.

Accounts of Works and Repairs.

296. The form of accounts to be kept by a workshop will be settled in each case by the Superintendent of the shops in consultation with the Chief Auditor.

M.—Accounts of Works and Repairs.

297. The Books, Accounts, and Returns relating to works are : --

Contract bills—Form No. 14.

Petty contract bills and hand receipts—Forms Nos. 15 and 16.

Register of Works—Form Nos. 30 A and 30 B.

Works slip—Form No. 31.

Register of liabilities—Form No. 41 F.

Completion reports—Form Nos. 45 A and 45 F.

298. The Register of Works (Form No. 30 A, Parts I and II) contains a record of every original work or repair estimated to cost more than Rs. 500, showing the expenditure, month by month, incurred on the work. The particulars of each sanctioned estimate must be entered in this register immediately on receipt of sanction by the Executive Engineer. The Register should be neatly indexed for ready reference.

299. In the case of works, the estimates for which are not detailed by sub-heads, or which do not exceed Rs. 10,000 each, the Register of Works, Part II, will show merely the total charges against the work ; for all other works the expenditure will be classified in the Register, Part I, against the different sub-heads of the estimates, and rates will be struck monthly on the value of each description of work done up to date. When the estimate shows the charges for labour and materials separately, the Register of Works will be prepared in the same way, and rates need only be struck for the items which are rated in the estimate. The number of sub-heads of each estimate exceeding Rs. 10,000 can be

Accounts of Works and Repairs.

reduced to a minimum, so far as audit purposes are concerned, by lumping up the minor items under Rs. 500 each into such groups as the circumstances of each case may allow.

300. With regard to minor bridges, the outlay on those estimated to cost over Rs. 10,000 each will be recorded by sub-heads in the Register of Works, Part I, the outlay on those costing Rs. 10,000 and under will also be posted in Part I of the Register without details of sub-heads, the columns provided for sub-heads being utilized to show the total charges on each bridge. All such minor bridges in each Division will be treated as one work in the accounts submitted to the Chief Auditor.

301. In posting the Register of Works in the case of works the accounts of which are kept by sub-heads, the last column relating to each work will always show the "Total charges"; the last column but one will show the "Balance due to contractors" which amount has to be deducted, the last column but two, will show the value of "Materials at site"; the last column but three the "Balance due by contractors" and the last column but four "value of work done up to date". In the case of works the accounts of which are not kept by sub-heads, the value of materials at site need not be separately shown, *vide* paragraph 274 but the amount due to or by contractors, if any, must be shown in all cases.

302. Liabilities will not be included in the accounts of works unless the Engineer-in-Chief may for special reasons think it necessary to rule otherwise in any particular case, but stores purchased on credit will be brought to debit through the medium of the Purchase Account and accounts of works will exhibit the value of materials delivered at the work but not paid for, as well as the totals of contract certificates on which part payments have been made, the necessary deduction entries to bring out the net payments being made under

Accounts of Contractors

artefacts due. This rule must not be held to imply that attention need not be paid to liabilities. Executive Engineers are responsible for keeping a strict watch over them and for reducing them as far as possible by means of prompt measurements and payments.

303. When a work is completed a double red ink line should be ruled below the last entry and a note made thus—"Work completed—Completion Report submitted 19 ."

N.--Accounts of Contractors.

304. The accounts relating to contracts are to be kept as personal accounts, and a separate folio should be opened in the Contractors' ledger (Form No. 36) for each contractor which account should embrace *all* transactions with him, whether relating to one or several works or to materials purchased from him. The contractors' ledger should show the number and amount of each passed bill and certificate, briefly naming the work and the number and amount of the cheque, but it is unnecessary to enter further details. The value of materials made over to a contractor should be debited to his account and a receipt for the value thereof taken from him in support of the debit. The contractors' ledger should be posted as bills are paid and it should be closed and balanced monthly and a copy furnished to the contractor whenever he desires it, and he should be encouraged to look at his account in the ledger and sign it in token of his acceptance of its correctness. Stores supplied to works under execution by contract will be accounted for as follows:—

- (1) When the contract is for labour only, by a direct charge as Stores to the work to which it is issued.
- 2) When the contract is for both labour and materials as a sale to the contractor the value being either recovered in cash or debited to the contractor's account for subsequent recovery by deduction from the amounts.

Accounts of Contractors.

due to him for work done. In these cases an unstamped acknowledgment of the receipt of the materials should be taken from the contractor.

305. Contractors' accounts should be closed without delay on the completion of the contract. If a contractor delays to receive final payment for more than one month after the final certificate has been passed the accounts of the work and of the contractor should be closed and the balance due credited to "Deposits".

306. The rules regarding contracts will be found in Chapter IV, paragraphs 113 *et seq.* The extent to which Engineers-in-Chief are empowered to accept tenders and make contracts is given in the Book of Financial Powers.

307. When the total payments involved are for a sum in excess of Rs. 50,000 the contract for the work must be ratified by the Secretary to the Railway Board. This limit does not apply in the case of a piecework contract on a schedule of rates.

308. When the payment made to a contractor is in excess of the value of the work done by him the excess will be shown as "due from contractor". Similarly, when the value of the work done exceeds in amount the payments made to the contractor, the deficiency will be shown as "due to contractor" the difference will be added to, or deducted from, the value of work done as shown in the Register of Works so as to arrive at the amount of actual expenditure incurred which is shown in the schedule.

309. The balances "due from Contractor" and "due to Contractor" in respect of each work will be abstracted from the Contractors' Ledger and the totals reconciled monthly with the totals for the respective works in the Register of Works. This reconciliation will be attested by the Accountant and recorded in the office.

Transfer Accounts.

310. It will be the duty of Executive Engineers to abstain as far as possible from making advances and they should endeavour to maintain a system under which no payments are made except for work actually done.

311. Engineers-in-Chief are empowered to sanction advances to contractors, not exceeding the limit up to which they can sanction new works, under the following conditions :—

- (1) That a contractor does not receive advances for a number of different works and from different officers
- (2) That arrangements are made with the Chief Auditor for proper accounts being kept with regard to these advances.
- 3 That all necessary precautions are taken to secure Government from the possibility of loss and for preventing the system becoming more general or continuing longer than may be absolutely necessary for the proper progress of the works.

O.—Transfer Accounts.

312. When cash is paid by an Executive Engineer on construction on account of, or stores supplied to, another division, the name of the division supplied will be debited under the head "Transfers of the Railway Department" in the accounts of the supplying division, and the transaction, so far as the first division is involved, will be final. But an immediate intimation of the date of payment or supply should be given in Form No. 41-A. "Advice of Transfer", to the Executive Engineer of the Division on whose account the payment is made, who will at once acknowledge the transfer in Form No. 41-B. "Acceptance of Transfer" and post the transaction at the same time in his Adjustment Book to credit of the transfer account to which the creditor division belongs, and debit of the work or head of service concerned.

Accounts to be sent to Chief Auditor.

313. Transfer transactions with officials other than Executive Engineers in charge of Divisions of the same Construction project will be adjusted in a similar manner with the Chief Auditor of the Railway.

314. A feature to be observed in Transfer Certificates in which Railways are concerned is that the originating and responding officers' debit and credit is in one and the same month. See paragraph 327.

P.—Accounts to be sent to Chief Auditor.

315. In addition to the cash balance return (paragraph 243) the following monthly accounts will be submitted by the Executive Engineer to the Chief Auditor so as to reach the Chief Auditor by the 10th of the following month :—

1. A copy of the Cash Book supported by vouchers.
2. Monthly Stores Account (Form No. 29).
3. Extract from Contractors' Ledger (Form No. 36).
4. Schedule of Miscellaneous Advances.
5. Copy of entries in Adjustment Book.

If the Chief Auditor considers it necessary to obtain further accounts and returns from Executive Engineers or desires to introduce a system of preaudit of expenditure the concurrence of the Engineer-in-Chief should be obtained.

Section II.—Accounts of Open Lines.**A.—Cash.**

316. On open lines of railways the initial documents upon which claims are to be preferred for audit and payment are—

	Form No.	G.
Salary Bills	"	2
Allowance Bills	"	4
Labour Pay Sheets	"	9
Contract Certificates	"	2 & 3
Petty Contractors' Bills	"	4
Cash Account	"	1
Bills for stores purchased	"	46
Pay Orders	"	14

Accounts of Open Liens.

317. Should any of the prescribed forms not be used, care should be taken that no particulars, certificate or signature required by the prescribed forms are omitted.

1. Executive Engineers submitting bills for payment should satisfy themselves that the same are correct and complete in every particular, and that sufficient authority exists for their payment.
2. All bills must be signed by the officer responsible for the outlay, any alterations or corrections in a bill being duly initialled. In the case of contractors' bills, the signature and initials to corrections of the contractor are also required, in order to avoid subsequent disputes with the Pay Clerk making the disbursement.
3. Bills should be sent by the Officer signing them direct to the Audit Office, but in the case of settlement bills the payee may be given a copy of the bill, distinctly marked as such.
4. A programme should be drawn up by the Audit Office in which dates will be fixed for the submission to it for audit and payment of salary and allowance bills, labour pay sheets and other claims of a recurring nature. In the submission of bills executive officers must, except in emergent cases, adhere strictly to the dates laid down in the programme in order to ensure punctual payment.
5. Bills must be dated and correctly allocated to the sub-head or works concerned, and, as far as possible, separate bills should be sent for Capital and Revenue.
6. In the case of Revenue bills, the month to which the bill is debitable should be noted, as, owing to the use of the head "Demands Payable," it is, as a general rule, practicable to bring the liability against the accounts of that month, even if the bill be submitted and payment made subsequent to its close.
7. No receipts from the parties to whom the bill is payable should ever be taken in anticipation of payment. The receipt of the payee should invariably be taken upon the original passed bill or Pay Order.
8. No claims of any class or description other than salaries and other personal claims of employés may be drawn in bills in the name of any servant of the railway.

Accounts of Open Lines.

9. To facilitate payments, the name of Pay District, the place of payment and the name and designation of Witnessing Officers (if necessary) should be noted on all bills, and, in the case of native labourers, the name of the father of each payee in addition to his own name should be entered in Labour Pay Sheets.

318. Salary Bill.—This bill in Form No. G. 2 will be used by all Departments for the purpose of drawing "Salaries," that is to say, the pay of Supervising and Clerical Establishments.

- 1 The names of men, who may from any cause have received their pay during the month in which earned, are not to be included in the Salary Bill for the month, their pay having been drawn in separate bills, but arrears of pay may be drawn in the monthly bill.
2. The monthly Salary Bill will be accompanied by a Memorandum of Differences in Form No. G. 3 (in which the causes of differences between the total of the salary column of the present bill and of that for the previous month will be detailed), by a List of Absentees in Form No. G. 5 and by a Rent Roll in Form No. G. 10.
3. All recognised deductions must be entered in the Salary Bills by the Departments submitting them for audit. Statements of Deductions in Form No. G. 8 will be sent to the Audit Office with the Salary Bills, where they are required as vouchers for the Cash Book or for the posting of the subsidiary books; but if arrangements can be made so that audit and payment of salaries are not retarded, these separate deduction statements may be dispensed with.

319. Allowance Bill.—Travelling and other allowances of a similar character should be drawn in Allowance Bills (Form No. G. 4), which will be supported by Journals in Form No. G. 6 or No. G. 7.

320. Labour Pay Sheet.—Wages of labourers will be drawn on Labour Pay Sheets (Form No. G. 9).

321. Contract Certificate.—For the exhibition of expenditure on works executed by contractors, two alternative forms are given, *viz.*, Forms Nos. E2 and E4.

Accounts of Open Lines.

The former is intended for use for running contracts and the latter when a contractor is paid up on finishing a single piece of work, or in paying several contractors employed on parts of one large work or several works on one section of the line. In the case of claims of Indian contractors, these forms should be printed bi-lingually throughout.

1. In the case of final payments to contractors for work executed, the bill (Form No. E. 3) printed upon yellow coloured paper, and with the words "as a final payment in settlement of all demands" inserted as part of the form, must be used. In the case of payees who can neither read nor write, their mark, seal or thumb impression preferably should be attested by two competent witnesses unconnected with the actual disbursement of the cash.

322. Cash Account.—The account of imprests held by Departmental Officers for ordinary office contingencies, will be included in the Cash Account (Form No. G. 1), a copy of which, with the necessary vouchers, will be submitted monthly, or oftener if necessary, to the Audit Office for audit and recoupment of the imprest.

1. Receipts of cash by Departmental Officers which are creditable to the railway in refund of expenditure or as sundry earnings or as deposits, will be passed through the Cash Account of the officer making them and remitted to the Cashier, through the nearest Station Master or direct if they are made at head quarters. The remittance must be accompanied by a Miscellaneous Receipt Transmit Note (Form No. G. 13) which consists of a note giving particulars of the remittance and a receipt in duplicate. The latter will be signed and returned by the Station Master or the Cashier to the transmitting officer, who will send the original receipt to the Audit Office and paste the duplicate to his counter-foil.

323. Bill for Stores purchased.—This bill will be prepared in Form No. 8. 46, which will be printed in both English and the Vernacular of the district in which used.

 Accounts of Open Lines. Adjustments.

Vendors of stores are to be encouraged to use this form of which blank copies may be supplied free of charge.

1. In the case of final payments on a running contract for the supply of stores, the same form, but printed on yellow coloured paper, will be used, and disbursement made as on final Contract Certificates.

324. Pay Order.—This Form (No. G. 14) is to be used only in the case of payment of lump sums for which no details of quantities are required, such as refunds of Provident Fund Deposits and payments of Court Attachments, etc.

1. Pay Orders will be bound in books and will be machine-numbered. These books will be treated with the same care as cheque books and will be issued on requisition only to those officers who have been authorised by the Agent to use them.

B.—Adjustments.

325. The following forms will be used in connection with the adjustment of expenditure:—

Bill Form	Form No. G. 25
Ballast train returns	" " G. 26
Transfer documents	" " C O. 31-32
Adjustment Memos.	" " G. 27

326. Bill Form.—Bills for freight of materials carried for Departments either for Capital or Revenue purposes are prepared in Form No. G. 25. This form, besides being used for such adjustment transactions, will also be used for preparing claims which are settled by cash recovery. A Register in Form No. C. O. 10 of all bills recoverable should be kept.

1. Bills for freight chargeable to Departments will be made out in the Audit Office and sent to Departmental officers for verification and acceptance and inclusion of the amounts in their Registers of Expenditure

Adjustments.

2. The freight due for ballast, fuel and water trains will not be intimated in this form, but in the ballast train return (Form No. G.26) which is prepared by the Locomotive Department in accordance with rules sanctioned by the Agent, and after audit will be sent to the debtor Department for inclusion of the freight in the Registers of Expenditure.

327. Transfer Documents.—Charges preferred by other Railways and Administrations are adjusted by Transfer Documents. These are usually sent to the Audit Office, by which office they will be passed on to the Departmental officer concerned for verification and acceptance when necessary and for entry of the amounts in the Registers of Expenditure.

1. All transfer transactions between Railways will be advised by the creditor Railway to the debtor Railway by the submission of a bill of charges accompanying the Transfer Certificate, Form No. C. O. 30.
2. In the case of a transfer transaction between a Railway and a Province, the transfer will be communicated in the form of an "Advice of Transfer" Form No. C. O. 31 and the acceptance will be sent in the form of an "Acceptance of Transfer" Form No. C. O. 32.
3. The creditor Province or Railway will enter in the Transfer Advice or Certificate the month in the accounts of which the transfer will be made, and the debtor Province or Railway should acknowledge the debit in the same month's accounts; if this cannot be done, it should propose another month which the creditor Province or Railway should accept.
4. In all cases of transfer, the debtor Province or Railway will accept in full the debit raised, reserving for future consideration any objections that there may be as to particular items.
5. All transfers to and from other Provinces and Railways and the Government Telegraph Department should be entered in a Register of Transfers Form No. C. O. 36 to be kept in the Audit Office.

328. Adjustment Memorandum.—This Form No. G.27 may be used in three different ways: *first* : or advising an adjustment to be made in the accounts of

Departmental Registers.

any Division itself; *secondly*, for advising such an adjustment between two Divisions or Departments, of the same Railway; and *thirdly*, for advising an adjustment to be made with another Railway or Administration.

1. In every case the Officer whose account is to receive credit should fill up the columns showing the credit; and (1) if the adjustment is to be made in his own Division or District, he should also fill in the column showing the debit; (2) if another Division or Department of the same railway is affected, he should send the Adjustment Memorandum to the Officer concerned, who should fill in the debit column and pass it on duly completed to the Audit Office returning the counterfoil to the originating officer; and (3) if another Railway or Province is concerned, the Officer to be credited, having obtained the debited Officer's acquiescence in the charge, should send the Adjustment Memorandum supported thereby to the Audit Office for the necessary transfer debit to be raised.
2. The entries in the respective registers of expenditure will be made by the responding officer when filling up the debit column and by the originating officer on receipt of the accepted counterfoil.

C. — Departmental Registers.

Engineering.

329. For the proper maintenance of the Way, Works and Stations, a railway is divided into Engineering divisions or districts, each in charge of an Executive Engineer, who is responsible for all the expenditure incurred in his district. The Authorization Rolls are so prepared as to record in detail sanction by districts, and Executive Engineers may without further authority (subject to such local restrictions as the Agent and the Engineer-in-Chief may, respectively, think fit to prescribe) incur expenditure on all ordinary maintenance works and establishments up to the limits thus provided; but the sanction of superior authority is required to

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other outlay even though it may be covered by the provision in the rolls, and for works of this category, for which specific provision does not exist in the rolls: estimates in Form No. E.1 must also be prepared and submitted for proper sanction.

330. In order to keep himself acquainted with the progress of expenditure in his district as compared with the sanction in the rolls, each Executive Engineer will keep a Register of Revenue Expenditure in Form No. C. O. 22. This Register is maintained by months, and every claim submitted to the Audit Office for payment is to be posted day by day, in the proper columns as regards allocation, of the Register for the month to which it relates, regardless of the month in which payment is made. For Permanent-Way Materials the charge to Revenue maintenance in the books of the railway for any month should be the cost of the materials actually placed in the road less the value of the materials taken out of the road (which should be immediately brought on to the Engineering Materials Account or returned to Stores) *plus* all labour. Debits for the value of other Engineering Materials issued for renewals or repairs or for special works should be made in the accounts of the month in which the issues occur. Adjustments on account of credit to Revenue for the value of materials released from works should be made when the stores are actually brought on to the Engineering Materials Account or taken over by the Store-keeper and brought on to the stores books. If the Executive Engineer should receive an advice that any claim submitted by him has been passed for an amount other than that for which he submitted it, he should at once alter the office copy of the bill or other document in which the claim was made quoting the Audit advice, and also alter the amount posted in his Register, initialling the alteration; or the correction may be made by an adjustment entry at foot, quoting the Audit advice and original bill. The alteration should be made in black ink, so as not to be mistaken

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for a credit which is entered in red ink. Adjustment entries and charges for stores will be similarly entered, and after the month's postings are completed, the Register will be totalled for comparison of the outlay with the sanction which should be entered in red ink at head of the Register. The Adjustments in connection with Mixed Works on which there is Capital and Revenue expenditure should be made in the manner described in paragraph 332.

1. A subsidiary register is required to be kept of the actual outlay incurred on the maintenance of branch lines worked as part of the main line system.
2. Registers in Form No. C. O. 40 are required to be kept for recording expenditure on New Minor Works, and that incurred on separate estimates sanctioned for extraordinary outlay against other heads of Abstract A.

331. For the record of Capital expenditure a detailed Construction Register (Form No. C. O. 40) will be kept, showing the amount of estimate sanctioned, the budget allotment and details by sub-heads of estimate in the case of works estimated to cost Rs. 10,000 and over; sub-heads estimated to cost less than Rs. 1,000 need not be separately detailed, but may be grouped together as may be found convenient.

1. The register will be arranged by main and sub-heads of Capital classification, folios being set apart for each work.

332. The manner of posting the detailed Construction Register differs somewhat from that adopted in the posting of the Register of Revenue Expenditure since the month in which a Capital claim submitted to Audit is required to be taken to account is the month in which it is paid. Consequently if a claim is submitted for audit so late in the month as to render payment unlikely in that month, it must be posted in the register under the following month. Adjustments will be posted in the month to which they refer if possible, or if the register for that month is closed in the earliest succeeding

 Departmental Registers.

month. In making adjustments between Capital and Revenue of expenditure on Mixed Works, the following rules should be observed :—

- (a) All items specifically provided for in an estimate for mixed Capital and Revenue Works as chargeable separately to Capital or to Revenue, should be adjusted to such accounts as incurred.
- (b) Expenditure which is chargeable to Capital and Revenue in certain fixed proportions, *e.g.*, renewals of vehicles chargeable on the floor area basis, or renewals of permanent way chargeable on the weight of material, should be proportionately debited monthly between Capital and Revenue.

NOTE 1.—In cases where the charge to Capital on the proportionate basis is limited to the difference in cost, the above rules will apply until the limit chargeable to Capital is reached, and thereafter all further expenditure will be debited to Revenue.

NOTE 2.—In the case of works estimated to cost not more than Rs. 25,00, the debit to Revenue of its share of the cost of the work need not be made till completion of the work.

- (c) The write-back to Revenue of the original cost of works dismantled and replaced should be made on the completion of the new work.
- (d) Fictitious adjustments should never, under any circumstances, be made for the purpose of utilizing or working up to grants.
- (e) In exceptional cases and with the sanction of the Railway Board, debits to Revenue for the value of materials which have not arrived in the country are allowed.

NOTE 1.—Differences from the Audit Office books due to postings in a month other than that in which payment was made need not however be disturbed during the course of the official year, but all such differences which exist at the end of March must be rectified in the supplementary postings for that month, so that the expenditure as shown by the register and the books of the Audit Office, respectively, may agree.

333. Executive Engineers will send their Construction Registers and Revenue Expenditure Registers to the Audit Office with a clerk, on such dates as have been mutually fixed between them and the Chief Auditor in order that the entries may be reconciled with the entries in the similar Registers maintained in the Audit Office and discrepancies corrected. This reconciliation must be effected once a month.

Transfers of Charge.

CHAPTER X.—Transfers of Charge.

334. The following rules describe the procedure to be followed in handing over the accounts and records of an executive charge, and apply fully to both Open Line and Construction whenever the Executive Officer has a drawing account. On Open Lines when payments are made by the Chief Auditor only the rules apply in so far as they relate to Imprest of Cash and Stores, Materials-at-site, Records, and the state of works, etc.

335. The Divisional Cash Book or the Sub-Divisional Cash Book or Imprest will be closed on the date of transfer, and a note, as per Form (A) below recorded in it, under the signature of both the relieved and relieving officers, showing the cash and treasury balances made over and received in transfer by them respectively.

336. After the cash at head-quarters has been counted and a receipt given for the unused cheques, and also for all records, instruments, drawing materials, stationery and office furniture under the immediate charge of the Executive Engineer, the following receipts prepared by the relieved officer will be signed.

Form (A).

Received in transfer from A. B. late (designation), _____

* Division
Sub-Division, the following sums :—

Drawing Account—

		Rs.	A.	P.
Balances at credit of—				
A—Treasury		2,560	8	6
B— Ditto		3,188	9	0
TOTAL		5,749	1	6

Transfers of Charge.

<i>Cash in hand—</i>		Ra.	A.	P.
In head-quarters chest—		100	10	10
	Ra. A. P.			
* Imposts Sub-Engineer	500	0	0	
„ Supervisor	200	0	0	
„ Overseer	200	0	0	
		900	0	0
TOTAL		1,000	10	10

Certified that the Cash Book has this day been closed, and that the balances shown in it correspond with the amounts entered above.

(Sd.) C. D.,

(Station and date.)

Designation *Division or Sub-Division.*

Form (B).

Received in transfer from A. B. late officer in charge _____ sub-division, the stores and tools and plant which have been in his personal custody, as detailed in the last balance return and accounts of receipts and issues to date. The returns for the year ended _____ and for the month of _____ for the whole sub-division have been submitted to the Executive Engineer, and the account of daily receipts and issues for the current month has been written up to date.

(Sd.) C. D.,

Relieving Sub-Divisional Officer.

(Station and date.)

Form (C).

Received in transfer from A. B. late Executive Engineer, _____ Division, the stores in his personal charge as detailed in the annexed list.

The balance returns of tools and plant in charge of all Sub-divisional Officers for the year ended _____ are on record, and have been prepared to end of _____.

(Sd.) C. D.,

Executive Engineer, _____ *Division.*

(Station and date.)

* Names should be given.

Transfers of Charge.

337. All cash, records, instruments and other articles under the immediate charge of the officer who is being relieved will be examined and counted, and made over personally to the relieving officer, who will note on the receipts any inaccuracies. In the case of mathematical and surveying instruments, a detailed report on their state will be prepared and submitted with the other receipts.

338. As soon as the cash in the head-quarters chest and other stores have been counted and the above receipt signed, the relieving officer will report that he has taken charge of the division, and this report, with the receipts, will be forwarded by him on the same day to the officer under whom he is working. All transfer reports will be passed on to the Engineer-in-Chief who will pass such orders thereon, in respect to any deficient articles, etc., as may be necessary; a copy of the receipts will be given to the relieved officer. Sub-Divisional transfer reports will be returned to the Divisional Officer for the final record.

339. The relieving officer will take up the expenditure of cash and stores from, and for the first day of, the month during which the relief took place, and submit the next monthly accounts in the same manner as if he had been in charge of the division during the whole month. But the relieved officer remains responsible that proper explanation is forthcoming for the expenditure and stores during his incumbency.

340. The relieving officer will then, unless otherwise ordered, proceed with the relieved officer, to inspect the records, cash, stores and works and materials-at-site-of works, under charge of the subordinates at the head-quarters station and in the relief of a Sub-Division this inspection will be applied also to works, etc., other than those at head-quarters. He will examine the accounts, count the cash, inspect the stores and count, weigh, and measure certain selected articles, in order to test the

Transfers of Charge.

accuracy of the returns, and will minutely examine the work in progress as to its quality and as to its correctness according to the sanctioned plans and estimates; he will also record his opinion as to the correctness of the account of materials-at-site.

341. An officer must not delay making over his charge after the arrival of the relieving officer; nor must he, without a medical certificate or the permission of his immediate superior, leave the station before the arrival of his successor.

342. The relieved officer will give the relieving officer a list and memorandum showing all the work in hand and the orders remaining to be complied with and of such matters as most require his attention, with full explanation of any peculiarity of circumstances, or apprehended difficulties.

343. He will also furnish the relieving officer with a complete statement of all unadjusted claims, with the reasons for their not having been adjusted in due course and a report as to any complication likely to arise owing to their non-adjustment.

344. When the above have been complied with, the relieving officer will report to his immediate superior that the transfer has been completed, and will describe the state of the records, cash, stores and works.

345. A relieving officer who fails to bring to notice within a reasonable period any deficiency, irregularity or defect in work or stores taken over from his predecessor, will be held responsible for the same, both as to quantity and quality, so far as it may have been practicable for him to ascertain.

346. An officer must not, without special authority liquidate any alleged balance due by Government to the officer he relieves, but an officer succeeding to the charge of a Division or Sub-division will take all steps necessary for the adjustment of his predecessor's public accounts in regular course.

Transfers of Charge.

347. In the case of transfers of charges, other than Divisions and Sub-Divisions, the Executive Engineer should issue instructions as to the works to be jointly inspected by the relieved and relieving officers. The Engineer-in-Chief should in every case inform the Chief Auditor of the dates between which the transfer was being completed, and full pay for the period may be allowed to the relieving officer. If, however, the Engineer-in-Chief considers the time taken in making over and receiving charge to be excessive, the relieving officer must be treated as if he were on leave or on joining time, etc., as the case may be, for as much of the time as may be regarded as excessive.

348. The joining time, or subsidiary leave, or privilege leave, of the relieved officer commences immediately after the completion of the transfer as reported to the Executive Engineer or Engineer-in-Chief.

349. A register of incumbents of charges should be kept in every Divisional office showing the period of incumbency of each officer who has held charge of the Division and of the several Sub-Divisions while in each Sub-Division a similar register should be maintained of changes within the Sub-Division.

350. Every officer or subordinate transferred from one Division to another will, on leaving the old Division, be furnished with a Last-pay Certificate in Form No. C. O. 90, showing the date up to which he has received salary and travelling allowance. If he is transferred to another railway, a duplicate Last-pay Certificate will be sent to the Chief Auditor for countersignature and transmission to the Chief Auditor of the new railway, who will await its receipt before passing finally any charges for pay or allowances on account of the officer concerned. In the case of an officer transferred to another department, a duplicate of his Last-pay Certificate will be sent to the Chief Auditor for countersignature and transmission to the Account

Transfer of Charge.

officer of the Department concerned. It should be noted against all entries of amounts due from and to the officer, how it is proposed or intended to settle them.
